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Photo by R. K. Williams

"Haligonian," with "Sunshine" close astern, crossed the line first, followed by "Marlen II" and "Windjammer"

"Gamecock" and "Sunshine" Win Race to Havana

Eight Yachts Start to Cuba in March Squalls and Six Finish During a Norther

By CARL L. WEAGANT

ALL sorts of things happened to the eight boats which set sail on March 28th in the St. Petersburg-Havana Ocean Race. The race was started in the face of an abating southeast gale when the storm warnings for small craft were still flying, and it ended while a norther was bombarding Morro Castle and the Malecon with heavy seas sweeping down across the Gulf of Mexico. In between these times some boats made landfalls thirty miles to the west of Havana, others were hove to, one had to claw off the lee shore of Cuba, and another sought shelter in the lee of a Florida Key.

Jutting south into the blue Gulf of Mexico, and forming Tampa Bay, is a palm-covered peninsula on the west coast of Florida which makes an ideal situation for St. Petersburg's active yacht club. Out of St. Petersburg's sheltered harbor the fleet of eight yachts set sail for the 286-mile run to Havana. March was blowing its nastiest in squalls from the southeast when the racers crossed the line at 2:00 p.m. on Saturday and started a beat to windward down Tampa Bay's choppy waters. The crews of the smaller boats knew well that they would take a thrashing, and the ladies sailing on board *Sunshine* and *Haligonian* knew they would probably be wishing themselves home before the race was over, but all hands were eager to go.

It was an unusual fleet which followed Commodore Houston Wall's smart Roué-designed schooner across the line off St. Petersburg's colorful pier. Following *Haligonian* was the 64-foot schooner *Sunshine*, the scratch boat, which spent her early days fishing off the Grand Banks. *Virginia*, a 54-foot schooner, was built during the Civil War and once carried cargoes of slaves. *Scimitar III*, designed by Jack Hanna and recently launched, with her clipper bow and husky stern, was reminiscent of *Spray*. *Marlen II*, a 31-footer, was modeled after the *Seabird*. Commodore Garner Tullis, of New Orleans, was there to uphold the centerboard tradition with *Windjammer*. The smallest of the fleet, and probably the sweetest, was the 30-foot *Gamecock*, and with Skipper Allen, who could have been grandfather to any member of the fleet and whom all would be happy to have for a granddad, the little black ketch was sailed hard and well. Last to cross was *Cynosure*, flagship of the fleet, flagship because her skipper, Gidge Gandy, is known to all the Gulf Coast as Admiral Gandy, and his work in organizing this growing international race makes him deserving of the respect due his title.

It was my good fortune to be on board *Windjammer*, but my ill fortune to be her navigator when the Gulf Stream stopped flowing during the hours that we crossed it. But before we reached the Stream, there was a hard beat to windward down Tampa Bay against the fitful gasps of the dying southeaster which gradually cleared as it hauled into a moderate norther. *Haligonian* led the way out of the Bay, followed closely by *Windjammer* until we blew out the mainsail. By the time a second mainsail was bent on, *Sunshine* was alongside us, with *Gamecock* jamming away close astern. Splitting tacks

"Sunshine" finished first on both elapsed and corrected time

with *Sunshine*, we made for the north channel out of the Bay, while she took the south. At sundown the remainder of the fleet were hull down astern, and were learning the lesson that a boat must go to windward to be a winner.

Outside, the Gulf was a confusion of seas left by the southeaster and cross-blown by the hauling wind which settled into the north by midnight. On *Windjammer* it was a race with *Haligonian*, last year's winner, but the reach we had hoped for became a run with the northerly. The second day was spent tacking *Windjammer* down wind, and then, in the evening, when the wind fell light, in anticipation of being becalmed in the Stream and landing in Miami, we tacked to the westward outside Dry Tortugas, the westernmost Florida Key. The direct course to Havana was twenty miles east, between Rebecca Shoals and Dry Tortugas, but we made the westing to counteract the two knots per hour of easting expected from the Gulf Stream. However, on the third night out, when the dark outline of Cuba appeared a mile ahead out of baffling haze blown offshore by a smoky southeaster, we found confusing lights. After considerable mast climbing, it was discovered that the lights of the supposed Havana were the lights of Mariel, twenty-five miles west of Morro Light. Nor was *Windjammer* alone in her landfall, for *Haligonian* was there and had sailed right into Mariel.

During the afternoon I was buried in Bowditch, Dreisonstok, and the others, trying to locate the error which put *Windjammer* too far to the westward and indicated that there was no drift to the Stream. I could find no error because there was none, but the reliability of the Stream's drift seemed better than my sights, so we paid no heed to them and continued on dead reckoning, allowing two knots for the Stream. The water piled up by the southeast gale, added to a spring tide at full moon, was bucking the Stream as we crossed, and we later found, by checking with other boats, that there was no current whatsoever during those hours. Skipper Denniston of *Sunshine* was the only one who believed his sights, with the result that he sailed into Havana Harbor first to take the handsome General Gerardo Machado trophy, while *Haligonian* and *Windjammer* wasted four hours beating up the coast.

The price of making a poor landfall seems invariably a beat to the finish line. However, as we beat along Cuba's steep green shores, before Morro Castle light flashed over the horizon, the easterly hauled into a stinging offshore southerly. As *Windjammer* crossed the line in the gusty southeaster, the bright colored flags, brilliant in the rising sun, high above on the mast of Morro Castle, signaled the arrival of the third racer. Then two anchors were let go in the harbor alongside *Sunshine*, who had finished shortly after four that morning, and *Haligonian*, which followed two hours later. Before *Windjammer* had fetched up on her anchor cables Signor Posso was alongside to give Havana's welcome and bring good cheer to the Americanos. Meanwhile, the southerly hummed in the rigging and we turned our thoughts to the little boats still out in head seas.

The beat down Tampa Bay was wet

However, the head seas did not bother *Gamecock*, for she came driving into Havana in the late morning to take first place in Class B. *Marlen II* followed her with Commodore Lew McMasters reporting a passage that will long be remembered by those on board. Then there was silence for a day, and anxiety for *Cynosure*, *Virginia* and *Scimitar* grew with the silence and the 50-mile norther which descended.

(*Continued on page 114*)

"Gamecock," winner in Class B, started with a reefed mainsail

Lakatoi in Port Moresby testing gear for the annual trading voyage to the Purari Delta

The Primitive Watercraft of Papua

By LIONEL P. B. ARMIT

PAPUA is so little known that a few words regarding its position in the Pacific appear necessary. It is the Australian-owned territory in the great island of New Guinea — the second largest island in the world — which is due north of Australia. New Guinea is divided into three sections: the Dutch own the western half, and the remainder of the island is almost equally divided into two separate territories, the northern portion, formerly German New Guinea, being administered by Australia under a mandate from the League of Nations as the Territory of New Guinea, and the southern portion — the Australian-owned section — is the Territory of Papua, the locale of this article. Torres Strait separates New Guinea from Australia, the nearest part of the continent being some 121 miles from the New Guinea coast.

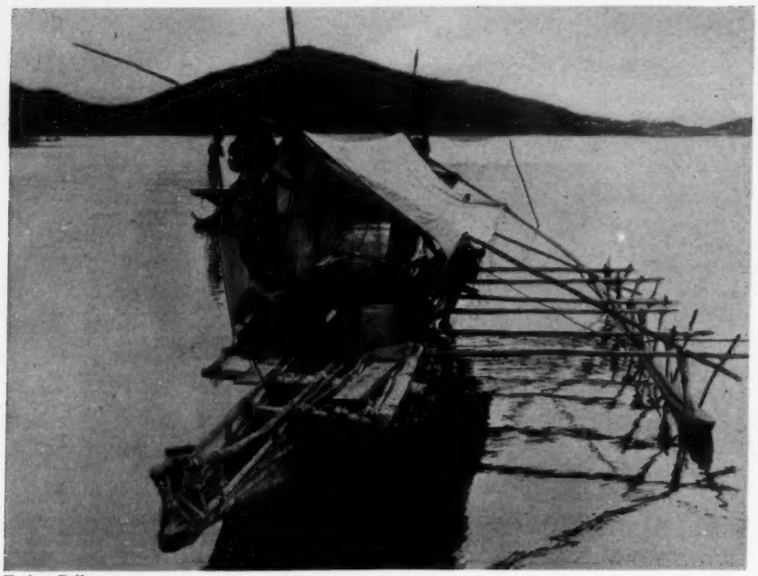
Papua, like its two neighbors, cannot be described in general terms, because its aboriginal population, estimated at about 300,000, is split into hundreds of tribes, each with its own particular habits and customs and language. Babel does not hold a candle to New Guinea as far as a multiplicity of tongues is concerned. This article, however, is not concerned with languages; it is a layman's effort to describe the various types of dugouts and sailing canoes that are used by the Stone Age peoples of the Australian territory.

Commencing our survey in the western end of the Gulf of Papua, we find the lake and river people use a very crude dugout log, a shallow craft, only a little wider than a man, that is more like a trough than a canoe. These are usually made from semi-hardwoods, though cedar is often used, fire and stone implements being employed to burn out and shape the logs, though in the last decade or two the steel of the white man has come into use. They range in size from fifteen to fifty and more feet in length, have no properly closed prow or stern, a lump of mud or a small boy being wedged into the bow or stern to prevent the water slopping aboard. They are very useful craft in smooth water but are easily upset — by people unaccustomed to their crazy habits. At ordinary times the crew, usually numbering from five to forty or more men, according to the length of the dugout, sit while paddling, but when the necessity to travel fast arises, the paddlers stand as they swing their long blades.

On numerous occasions, while cruising in a motorboat that could hit up a good ten knots, I have raced these speedy craft — and been badly beaten. The sight of a fleet of these low-wooded craft streaking along the yellow waters of a jungle-fringed stream, long black hulls indistinct through the surging foam churned up by the dipping paddles, is something to remember. The paddlers stand erect as they swing their blades in perfect unison to the throbbing beats of a snake-skin drum, black bodies under red-gold paradise plumed headdresses glistening in the flowing gold of the noon-tide sun, and the air full of the clamor of flocks of shrill-voiced parrots, cockatoos and other birds, scared from the depths of the forest by the shouting savages.

How the natives hold these crazy craft right side up, and keep their balance as they stand and paddle, with the canoe lurching and swaying under their feet, has always mystified me. On many occasions I have seen skilled canoe-men, natives of other districts in Papua, where this type of dugout is unknown, try to stand and paddle these craft in the same manner, but never once have these experimenters traveled more than a few yards before the dugout rolled over and spilled them into the stream. Probably one needs to be trained from infancy to be able to handle these awkward craft with the skill of these rivermen. For the river folk grow up in canoes; even babies of three and four can take their turn with a light paddle when the necessity arises — or when their parents feel too tired to handle a paddle.

The islanders in the estuary of the Fly and along the adjoining coast use a single dugout that is balanced by twin outriggers. These are speedy craft, especially under sail. In the old days, before the white man's duck and



Ewing Galloway

An outrigger canoe of the type found in Port Moresby. These craft are said to be exceedingly fast

calico came into use, the sails were made of hand-woven reeds. One and sometimes two masts are stepped on the platform of these canoes, the sails being rectangles of cloth carried on a gaff or a sprit. Some of them use a jib, but before the advent of the white man this extra headsail was not in use. The sharp steel now replaces the blunt stone adze in the manufacture of these craft, though fire is still used to burn out the log. This latter remark applies to all the other types of canoes that are made in the other parts of Papua.

The Fly River craft vary in size, the largest being about fifty feet in length. The average crew is six, two men being necessary to steer. Like all canoes that carry outriggers, either single or double, the canoe does not have a bow or a stern; they sail equally well either way, the outrigger on a canoe which carries only one outrigger being always kept to windward, and the steering oar shifted to the end that becomes the stern when the craft "goes about." The Fly River canoe is very capable, even in a heavy sea, though it occasionally loses one of its outriggers when an extra big wave drives against it. This latter possibility is always present when one ventures on the water in any canoe that carries an outrigger. I have vivid recollections of many journeys in this type of canoe, when, for several hours, one of the crew spent his time sitting on the outrigger wielding a billet of mangrove as a hammer to drive back into the "balance log" the stakes that held it securely to the canoe. Capsizing in the shark-infested waters of Papua is nowhere pleasant, but to be spilled out of a canoe anywhere 'round the Fly or the rivers thereabouts is much more perilous, as there are both crocodiles and sharks in these waters. In times like that one yearns to be aboard an honest-to-goodness keel boat!

Traveling east from the Gulf of Papua, one finds canoes of a different type — craft that are simply a platform laid on two dugout logs. This type is very useful for river work, and along the coast in fine weather, but under sail they can go only before the wind, though some of the lighter ones do sometimes beat fairly well. Some of the tribes cover in the tops of the logs with matting when they are starting on a long trip, but even this addition is not of much use, for a heavy sea soon tears it open. They are rigged in the same way as the Fly River craft. Fitted with an outboard motor, they make admirable river craft, for they can be built sufficiently large to carry three or four tons. Some of the river people build these double-canoes with very long hulls set about a foot apart, to enable them to travel the maze of narrow streams that lattice the mangrove and sago swamps.

In the district around Port Moresby one finds the largest canoes in Papua — the *lakatoi*, a craft that is used only once a year, when the people transport many thousands of earthenware cooking-pots to the river folk of the Purari Delta, to barter sago and canoe logs. This annual trading trip is so arranged that the journey both ways is made with a fair wind — the *lakatoi* fleet departs for the west with the last of the southeast trade wind and returns home with the first of the northwest blow, the monsoon that is the season of the rains in Papua. A *lakatoi* is always much larger on its return,

Tying together a single outrigger canoe

for many additional logs are built into it during its stay in the Delta, to enable it to carry the many tons of sago that the crew has purchased there.

The *lakatoi* usually has two masts, there being a "captain" in charge of each stick. Prior to the departure of the fleet on this western voyage, the "captains" abstain from various foods and live apart from their wives for a certain number of weeks, so that they will be in proper condition to negotiate the passage safely. There are other minor ceremonies in connection with this annual voyage, but space does not permit their inclusion in this article. The *lakatoi* carries two large mat sails, the tops of which are shaped not unlike a crab-claw. The reason for this peculiar cut is said to be due to the necessity of reducing sail as speedily as possible. The sails are bent onto two yards, the usual sheets being attached for trimming. In heavy weather sail is reduced by lowering the sail until the lower yard is on deck, the matting is then rolled up and secured with points, and the remaining area hoisted once more. It takes about eight men, each with a heavy steer-oar, to keep these awkward craft before the wind; they are picturesque vessels, but absolutely helpless against a head wind, for actually they are only a glorified type of raft.

In contrast to the lumbering *lakatoi*, the Port Moresby and the other tribes that live on the coast within sixty miles of that port have evolved a very speedy single outrigger canoe, which travelers who know the Pacific well declare to be the fastest sailing-canoe in that wide ocean. I give this statement for what it is worth, for I have no knowledge of *all* the various types of sailing canoes that can be found in the Pacific; but I can say that I have seen these Port Moresby craft often move at a good twelve knots when a heavy southeaster was blowing. The hull of this craft is usually about 40 feet long, with very clean lines, the length on the water line being about 30 feet, beam about 18 inches, and depth of hull about 30 inches — sometimes a few inches deeper. The platform, supported by the outrigger, is usually about ten feet long by five feet wide, the outrigger log being shaped — streamlined — so as to offer little resistance to the water.

Two masts were formerly carried, the sails being miniatures of the crab-claw type used on the *lakatoi*, but nowadays this shape is discarded in favor of a rectangle, in some cases a square, of duck or strong calico.

A Vaga-ue, the nearest approach to a boat evolved by the Papuans. Note the peculiar bow piece and the carving on prow

No headsail is carried, the foremast being stepped about ten feet from the end of the log, and the mainmast the same distance from the other end. Recently, through so many of these craft being too heavily crowded with two big sails, the natives have begun to use only one mast and a sail. This innovation arose through the efforts of local white sportsmen, who use these canoes in their weekly sailing races during the southeast season, and who found the old type too unwieldy for this sport.

But to return to the native-owned craft. Though fast, on or off the wind, they are tricky to handle, and at least two steering oars are necessary to keep them from luffing, which generally means getting caught aback and turned over. In addition to the steersmen, six or more men are carried as crew, their job being to bail or scramble out on to the outrigger every time a gust makes it lift from the water. Often during a race I have seen one of these craft careering across the sun-jewelled blue water with the speed of a scalded cat, while her crew sat perched on her outrigger two feet or more clear of the surface. To carry on while the outrigger is just clear of the water is the desire of every soul aboard these fast craft but — a sudden puff often spoils this burst of speed! I once saw 21 of these craft begin a race, but when the winner crossed the finish line only four of her opponents were still right side up. Two of the fallen fleet had shed their outrigger logs; the rest had carried on too long and turned over. Yes, racing one of these craft does give you a great "kick."

We now move further east to the Amazon Bay district, the home of one of the best sailing canoes in Papua. This craft is a form of double canoe, but each dugout is planked up about two feet, sometimes more. The planks are attached in the same way as planks are set in a carvel-built boat, but as the natives are unable to obtain metal fastenings, they use lashings from the jungle, a tough vine or split rotan cane being the usual cordage. The planks are firmly fastened with these ties to the frames, which are themselves strongly secured to the keel-log, the joints being made watertight with a caulking of teased out bark and native gum. The ends of the planks, the bow and stern, are then closed with a balk of timber, the usual platform is built over the two hulls, a mast stepped on a thick plank amidships, and the craft is ready for sea. One of the hulls, an old native friend once assured me (and as he is the leading canoe-builder in Amazon Bay I have no reason to doubt him) must have a kink in it. This, he said, makes the canoe lie close to the wind! I don't know. At any rate I can say that I have seen hundreds of these canoes, but so far I have yet to find a canoe that has two straight logs in it. The smaller log was always kinked, so my ancient pal's statement may be correct!

These craft, or *lugumi*, to use the name their owners give them, are quite seaworthy, and they can carry up to six tons. They carry only one sail, a crab-claw shape not unlike the sail of a *lakatoi*, the yards it is bent on

Double canoes of Macfarlane Harbor. The monthly steamer is responsible for this gathering of villagers

A single outrigger canoe used in the D'Entrecasteaux Group

being much the same as those used on its larger sister. But the *lugumi*, unlike the *lakatoi*, is a sailer, fairly fast both on or off the wind, and very much more easily handled. It is steered with a type of rudder, a hefty lump of plank that is lashed to windward aft, the steering being done with a tiller that is shoved through clips of cane on the side of the rudder plank. These craft make voyages of hundreds of miles, often right across stretches of really rough water, when their owners go forth to barter shellwork for fat hogs, or other equally desirable objects. Incidentally, the hog is the medium that the Amazon Bay people use in the purchase of wives, though as the custom of annual payment for a wife is followed here, the married man has to hand over a pig every year to his wife's folk!

The *lugumi* is handled like an outrigger canoe, except that the rudder-plank has to be hauled aft each time the course is changed when on the wind; in very heavy weather paddles are used as lee-boards to stiffen her. When it is necessary to shorten sail, the same method is used as in a *lakatoi*. I have used the *lugumi* on many trips along the coast, so I can speak of them as good, but rather deliberate craft, though for crossing bars in a heavy surf I prefer them to the lighter type of canoe. The women of Amazon Bay are very expert in these canoes; the early explorers met several *lugumi* "manned" by women in this bay. Hence the name.

We now reach the Orangerie Bay district, the fringe of an area that reaches far out beyond South Cape to the Louisiade Archipelago, where the highest type of sailing canoes in Papua are used. This is a much smarter craft than the *lugumi;* moreover, it is the nearest approach to a boat that these primitive people of Papua have evolved, because it is what I would term half-boat and half-canoe. It is constructed on the same principle as a boat, a real keel, frames and ribs being used to carry the planks, which are securely tied to the frames and ribs, and to each other, with the usual cordage of the Stone Age folk — vine and split cane. But, unlike a boat, it can remain upright only by the aid of an outrigger, though even with this disadvantage it sails very well and is exceedingly seaworthy. It uses a mat sail, lozenge-shaped, bent onto two booms, which is handled, so far as reducing sail is concerned, in the same manner as the sail of the *lakatoi* or of the *lugumi*. The natives call this canoe *vaga-ue*, which means "sail canoe." It ranges in size from 25 to 40 feet in length, the larger sized craft having a beam of some two feet (the hull only is referred to) and a draft of about one foot, the hull being some four feet deep. Carved prows, rude paintings of fish on its lime-washed sides, strings of giant white cowrie shells fastened to the prows, and streamers of white pandanus fibre and bunches of cassowary plumes all add to its appearance. A platform or deck is built on the main outrigger bearers, which in turn are carried on spikes secured to the outrigger-log, the latter being rounded off at each end to lessen its drag through the water. The usual steer-oars are employed, one man being sufficient to handle the craft in fine weather. The tribes that use the *vaga-ue* also use the ordinary single outrigger canoe, the former being employed for only long voyages.

Another type of canoe which the natives of some islands near the D'Entrecasteaux Group use is a smaller *vaga-ue*, but it has no keel, the two planks that form its sides being built onto an ordinary dugout log. This canoe carries the usual outrigger, and is equally useful with paddles or with a sail.

A lugumi of Amazon Bay. This is a form of double canoe, but each dugout is planked up about two feet

Returning to the mainland of Papua, near China Strait, we find the usual outrigger canoe in use; but in Milne Bay a single dugout is the rule. The people here know and use the ordinary outrigger canoe, but their preference seems to be the long needle-prowed dugout log. These range in size from 15 to 60 feet in length, the prows and sterns often being carved with designs that represent birds or fish. Manned with a crew of hefty young men, these snaky craft can travel very fast.

From Milne Bay going north along the coast to the border of the mandate territory of New Guinea, the ordinary single outrigger canoe is the only water craft in use. These have a few slight variations, the platforms being larger in some tribes than in others, but they are all very much alike.

One district on this coast has very few canoes, rafts of logs propelled by a paddle made from the butt of a palm-leaf being the principal means of travel when going on fishing trips.

Copyright M. Rosenfeld

Shattering the world's speed record at Miami. "Miss America IX" finishing the run on which she averaged 102.256 m.p.h. A few days later "Miss England II" broke these figures in a trial at Buenos Aires, with an average of 103.49

About Those Motor Boats

Breaking the World's Records on the Water

By GEORGE W. SUTTON, JR.

MAY will bring forth several things besides flowers — and rheumatism for trout fishermen. It will produce, on the ninth, the Albany to New York race and, on the evening of the sixth, Gar Wood's radio talk over the NBC national hookup in an interview with Grantland Rice. The former should be worth seeing and the latter worth hearing.

Gar is no stranger to the microphone and his description of his twenty years at the wheels of racing boats should be an important stimulus to the sport which he has done more than any other person to keep alive.

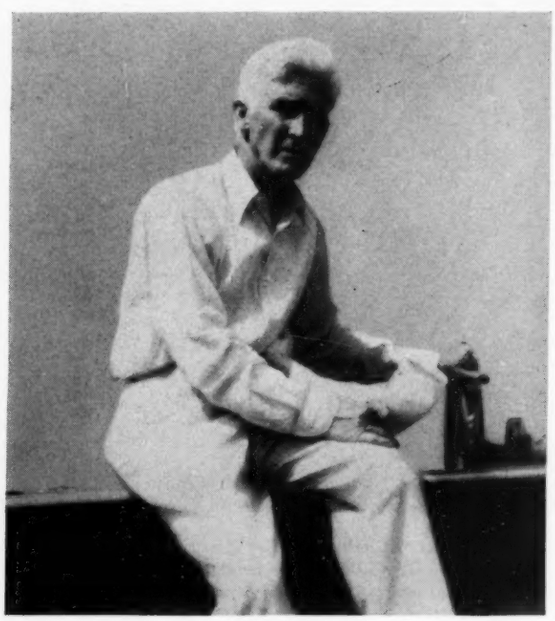
I don't know yet what he will say over the air under the skilful questioning of America's best known sport writer. Here, however, are some of the things he will not say but which he propounded to me in a three-hour chat the day Kaye Don's recapture of the world's record with a speed of 103.49 m.p.h. was reported from Buenos Aires. Remember, this is Gar Wood speaking.

"I'm congratulating Don on his record in that dangerous boat as a splendid stimulant to friendly international rivalry and I am telephoning Orlin Johnson in Florida to fix up our boat so that, in a few days, we may give Brother Don something new to shoot at. The bottom of *Miss America IX* has not been touched since the Harmsworth race last September, and proper scraping, potleading and such should give her a mile or so more speed. A few engine adjustments should add still more. I thought Don would break my record by a much wider margin. He exceeded our time by only $^{45}/_{100}$ of a second. If we can find a damp, foggy day in Florida, the moisture in the air alone should give us at least a full second more. I won't predict any speed for us beyond about 105 miles an hour, but wait and see what we do in the next few days.

"I have not yet learned whether or not Don's record will be officially accepted here. It all depends on the method of timing he used and the accuracy of the course. To conform to A. P. B. A. rules these international mile trials must be electrically timed, with a wire running the full length of the course attached to clocks at each end working in harmony. The reports said Don had electric chronometers at either end, but we do not know what that means. Anyhow, we're going right ahead on the assumption that Don's record is all hotsy-totsy in every way and we've got to beat it.

"But how many times have we got to beat it? Suppose we make a new record now. Then Don may go to Italy and set up a new mark there. Seems to me there might be a set time for assaults on the world's record and that in every case officials of the international ruling body and the American Power Boat Association should be present so that no questions can arise as to the correctness of courses or timing arrangements.

"*Miss England II* has 2000 horsepower more than we, without any more weight, and I was sure she was many miles faster. The report that we put in a new motor is not true. We changed one bank of six cylinders but the motors are the same 12-cylinder Packards that went to the bottom of the Detroit River with Johnson and me in *Miss America VI* three years ago and later that same year to the bottom of salt waters, in Venice. Our engines are not equipped with superchargers, as are those of the British, both the 2000 h.p. Rolls-Royces in *Miss England II* or the 1350 h.p. Napiers in Miss Carstairs' *Estelle V*. If Captain Woolson, aviation engine designer for Packard, had lived he would have worked out superchargers for these engines by this time. One of the big electrical companies has devised suitable superchargers which will raise our engines from 1060 h.p. each to about 1800 h.p. I didn't use them in the recent trials because I figured that we could break the record without them. If Major Segrave had lived and had come over here last summer for the Harmsworth with *Miss England II*, or something equally formidable, we had a design ready which would have surprised a lot of people.



The veteran "Gar" Wood at the wheel of "Miss America IX"

"Now, however, I am convinced that *Miss America IX* is faster than *Miss England II* and that, in mile trials, with a few things done to the hull and engines, we can beat her, boat for boat. In the Harmsworth I think we would have no trouble in beating her in speed, maneuverability, and in the strategy and generalship of our racing combination. No, *Miss America VIII* is not faster than *Miss America IX*. Ask my brother George. What about it, George? See, he says so, too!

"I think the superior design of our hulls and the greater efficiency of our propellers account for the equality of speed between the Segrave boat and ours. Our twin propellers have a slip of only 20 per cent, while the single propeller of *Miss England*, trying to transmit the enormous 4000 h.p., digs a great hole in the water and has a slip of at least 50 per cent.

"The British Government is subsidizing the development of high power aviation engines. The result constitutes a marvelous world-wide advertisement for British machines and British engineering, not to mention its vital value for sterner purposes. With Segrave's engines, I think *Miss America IX* could do 120 miles an hour. Under sponsorship of the British Air Ministry, the English motor makers have discovered the secret of low weight per horsepower and they are guarding it well. The new Napiers, weighing less than 1600 pounds, deliver 2500 h.p. each, with superchargers. The Rolls at the same weight creates 2000 h.p. I should like to see our government adopt a similar attitude toward high power in this country. At present we seem to have reached pretty nearly our limit in power. The superiority of Europe in this direction is, naturally, due to the keen rivalry between France, England and Italy in the air. Our non-participation in the Schneider Cup races is largely responsible for our lagging behind in aerial power plants.

"I believe the British Air Ministry, Rolls-Royce and Napier would be delighted to have me use their engines for further attacks on the boat record. But in that case it would not be a wholly American boat nor an American record, if I made it. I might even have to call the boat *Miss International*, or something of the sort. But we shall see what we shall see. Yes, I'm going to stick to the single-step hydroplane type of hull. It is the most efficient for skimming over the surface of the water with a minimum of skin friction.

"They say Kaye Don is afraid of *Miss England*. I don't blame him. I wouldn't go across the East River in her. Any high speed boat in which the driver sits in front of the engines is lethally dangerous. At high speed water is just as hard as concrete. These high powered boats do not upset, as a rule. They dive, and a wall of stone-hard water comes over the bow and smashes the driver to pieces against the engines. That's what happened to Segrave. When Orlin Johnson and I took a dive in *Miss America VI* at way over 80 miles an hour, we had no such experience. The engines broke up the

(*Continued on page 114*)

"Ingomar" with her racing rig during the early years of her long life

Vale "Ingomar!"

A Yacht Long Famous in the Annals of Yacht Racing Meets Her End

By WILLIAM H. TAYLOR

ONE of the most famous schooners in the history of American yachting, *Ingomar*, went to the bottom last February after a battle with the dreaded Frying Pan Shoals in which she put up as game a fight for life as she had ever put up for victory in her earlier racing career. *Ingomar* was one of the best known American yachts of a quarter of a century ago, both here and abroad, and if her loss is mourned, at least she went down with colors flying.

"Nat" Herreshoff built *Ingomar* for the late Commodore Morton F. Plant, in 1903, and no greater tribute can be paid her than the famous builder's own remark, made repeatedly in recent years, that she was one of the finest schooners he ever turned out.

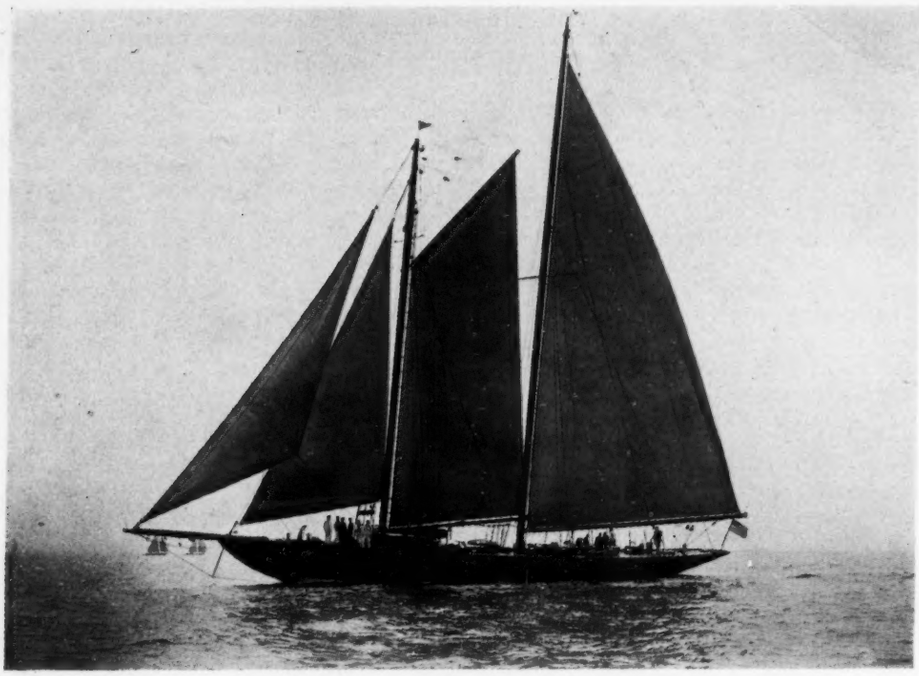
Ingomar's last owner was Albert L. Hoffman, of New York, and at the time she was lost Mr. Hoffman was planning to take her abroad for a cruise over the waters where she raced twenty-seven years ago. The last edition of Lloyd's Register in which her name will ever appear shows her to be a steel schooner, 127 feet over all, 87 feet water line, 24 feet 3 inches beam, and 12 feet draft — dimensions which have varied a little during her career as the result of changes in ballast, and other minor details. She was a handsome vessel, with a rather straight sheer and her beam carried out into her ends, which gave her a look of power rather than grace.

Though Mr. Plant built her to race abroad, he gave her a season's try-out in American waters before she went. Her first racing was on the 1903 cruise of the New York Yacht Club, in which she was scratch boat of the Class B schooners. She won in her class on her first start, Glen Cove to Morris Cove, beating *Emerald*, *Ariel*, *Corona* and *Chanticleer*. Furthermore, she won, in that class, every day's run of the cruise, took the Vice-Commodore's Cup for all schooners on the Vineyard-Newport run, won the Astor Cup for schooners next day off Newport, and was awarded the Navy Cup for the schooner that had won the greatest number of squadron runs on the cruise.

Encouraged by this record, Mr. Plant sent her abroad early the following summer under the famous Captain Charley Barr, and she anchored in Southampton after a fast crossing of fifteen days. Shipping longer topmasts, main boom and bowsprit, she started out to race in various British regattas and went on from there to the German races. The detailed record of her races in British and Continental waters is not readily available, but it is perhaps enough to say that she made twenty-two starts, won nineteen of them, and finished second in the other three.

The yarn of her voyaging and racing abroad is contained in Major B. Heckstall-Smith's book *All Hands on the Main Sheet*. As the Major was a member of *Ingomar's* afterguard during much of her career over there, the story is an intimate as well as an entertaining one, though too long to quote here in full.

"The 248-ton schooner *Ingomar* was an extremely grand vessel," writes Major Heckstall-Smith in opening the chapter that deals with her career, and he goes on to express regret that the British yachts of 1904 were



"Ingomar's" shortened rig which she carried at the time she was lost

unable to give her better competition — an eloquent, if indirect indication of the swath she cut in British waters.

Ingomar introduced to British yachtsmen what appear to have been innovations there in 1904, though they sound ordinary enough now. She was the first big racing yacht they had seen steered with a wheel, and they liked that. She had several handy winches around her deck — evidently a notable invention for handling sail. And below decks she had acetylene lights, of which Major Heckstall-Smith didn't think so much.

Another feature of the yacht, and a curiosity even to her last days, was the circular main saloon surmounted by a big circular skylight between the masts. It was an odd affair, delightful at anchor but not so good at sea, according to the Major. For one thing, the skylight worked like a mushroom ventilator and could not be opened on the lee side and closed to weather to keep out spray. Then, too, the saloon, with a fixed table and movable chairs, seems to have been a great place for falling around in, with no corners into which one could wedge one's self.

Ingomar's tendency to take a sharp angle of heel rather suddenly aggravated this difficulty, according to the Major, whose book abounds in incidents of elderly ladies and members of the royalty and nobility scrambling about on the floor of the saloon.

"Down by the lee settee," reads one such passage, "were pearls, plates, knives, forks, decanters, hairpins, hams, broken chair legs and salad." Another time, when a German prince was below reading a paper as the yacht left Ostend, she took a quick, sharp heel. Presently, the Major went below to find His Highness sitting on the floor to leeward, calmly lighting a cigarette, with the paper he had been reading impaled on a gas jet high above him on the lee bulkhead.

From the British ports *Ingomar* went to Boulogne and to Ostend for races, and then to Cuxhaven, Germany, where she had her introduction to the Kaiser. There she lay at the quay alongside the Kaiserin's schooner *Iduna* and the Kaiser used to lean against *Iduna's* backstays and chat across the few feet of water with *Ingomar's* afterguard.

Kiel, however, provided the real show, and there occurred an incident that made *Ingomar* and her crew famous. Yachts belonging to the royalty of all Germany, and some other lands, were there, but *Ingomar* went right on winning, receiving a little time allowance from the Kaiser's larger American-built schooner *Meteor III*.

Major Heckstall-Smith found much to amuse him and his readers in German racing tactics, and in the time allowances and the race committee which, over its bread and cheese and beer, worked them out. The allowances, it seems, varied inversely with the average strength of the wind at various points on the course. After finishing the race you waited while the wind velocities were reported to the committee, and the committee, using their steins as calculating machines, decided whether you had won or lost, and by how much.

A feature of the yacht was her circular main saloon amidships

But *Ingomar's* most famous exploit at Kiel was the near-sinking of the Kaiser's *Meteor III*. So many versions of this yarn have been circulated that we shall quote, in part, Major Heckstall-Smith, who was the official racing-rules expert aboard the American yacht.

Ingomar, on the starboard tack, and *Meteor*, on the port, were converging, each logging nearly eleven

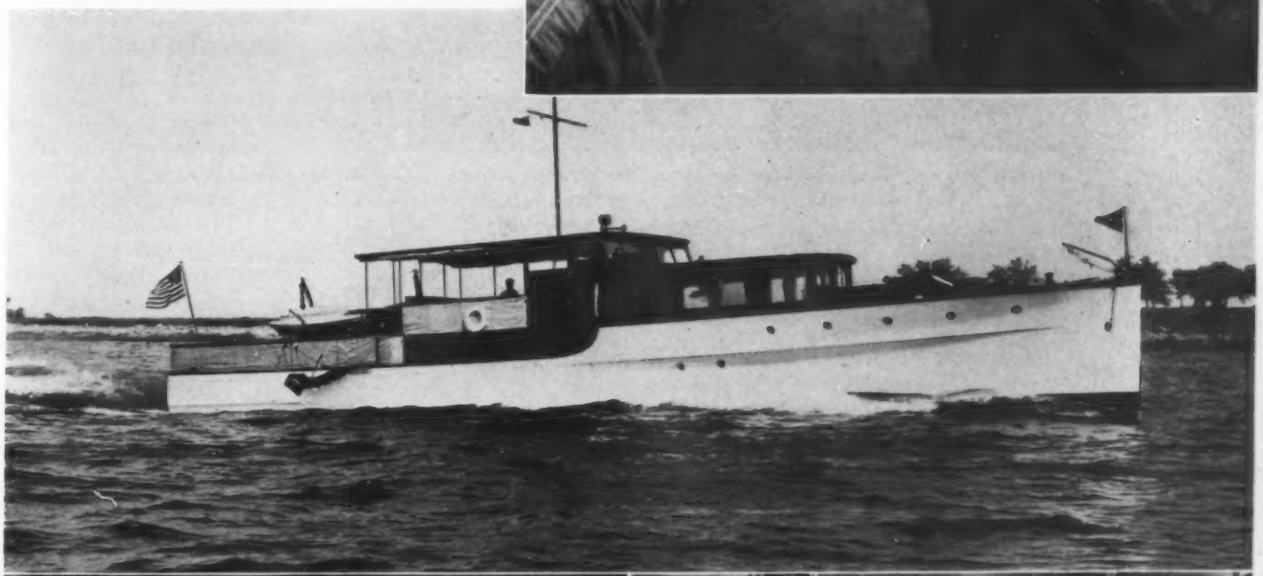
(Continued on page 132)

"All Alone"

One of the Fastest Express Diesel Cruisers to Make Her Appearance

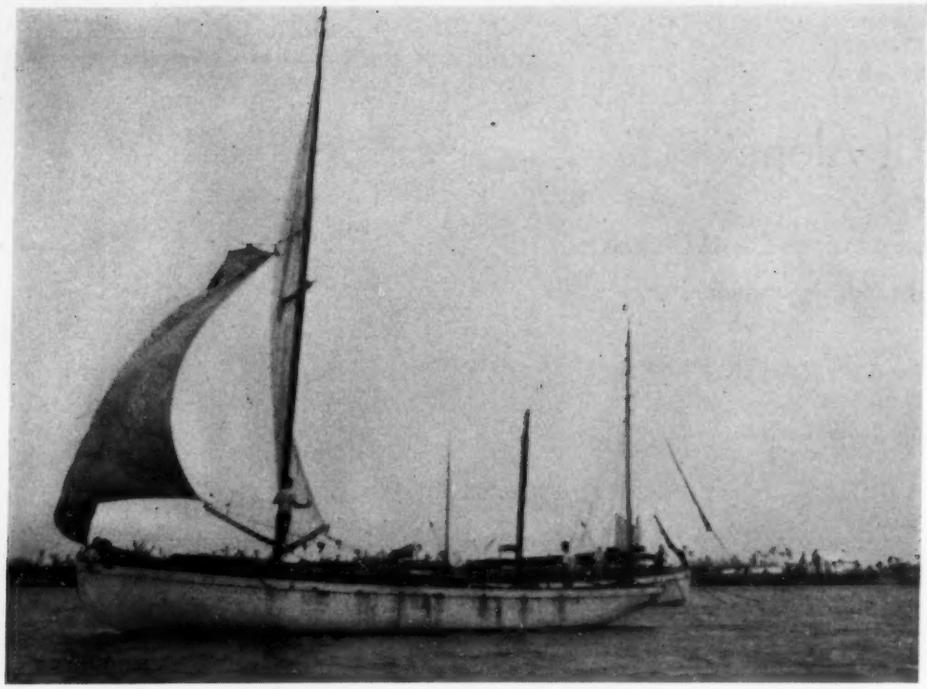
+ + +

Designed and built by the Mathis Yacht Building Company for George W. Codrington, of Cleveland



M. Rosenfeld

In this 80-foot Diesel cruiser, the designers have turned out an unusual boat for her size. With two 300 h.p. Winton Diesel motors, weighing only 6500 pounds each, she can maintain a speed of 20 m.p.h. for long periods. During the past winter "All Alone" made the outside passage from Jacksonville to Miami, a distance of 340 miles, in 17 hours



Smeared with the filth of Mediterranean ports, "Carlsark" sailed into Nassau Harbor after 51 days at sea and dropped anchor alongside "Daydream II"

North from the Isles of June

Carlsark Returns to New York from San Salvador by Way of Nassau

By CARL L. WEAGANT

ALMOST in the same manner that Columbus first sighted the lights of Indian canoes that told of a new world, we, on board *Carlsark* caught sight of the San Salvador light at ten o'clock on the forty-ninth evening out of Tenerife. Rising and falling in the deep swells of a coming Bahama Norther, *Carlsark* surged nearer that patch of green and coral which for seven weeks had been the center of our hopes. But, as we drew nearer the island's powerful light, San Salvador turned into a serious menace. The Norther had descended and was opening fire with chilly blasts which were pounding 20-foot seas against the savage coral reefs extending five miles to the north of San Salvador and directly across our path.

Coming in from the southeast, we had, after the landfall, altered course to the northwest toward the Northeast Providence Channel, between Eleuthera and Abaco, and leading to Nassau, our destination. In altering course it was necessary to strap *Carlsark* close into the Norther, but not close enough, for we found ourselves heading for the reefs. At least, according to our judgment of *Carlsark's* distance from the light, we thought we were headed for the reef. But our judgment was queer; one minute the light appeared at least fifteen miles away and the next only a mile. We had been looking at the sky, horizon and stars for such a long period that our ability to estimate distance was worthless and the seas were running so high that bearings were impossible. Instead of seeing the tropical island of green set in an iridescent sea which we had painted in our imaginations during the long black watches, now we visioned the ghastly result of being smashed against dagger-like coral heads. So *Carlsark*, ironically, was forced to tack seaward and away from that bit of coral which we had sought for 49 days.

As the sun rose over the island we found ourselves well out of danger, but the Norther had ruined our hopes of landing. We kept the sea and continued toward Nassau, slamming into the half gale. By noon San Salvador was only a hummock which appeared as we rose to the crests of the combing tropical seas. *Carlsark* was virtually hove-to under jib and storm trysail, but the Bahama Current carried us rapidly northwestward.

It continued to blow, saturating everything above and below, but *Carlsark* continued to drift and slam along, and on the evening of April 11th we swung into the Northeast Providence Channel and under the lee of Abaco Island. As the moon rose full over a smoother sea, the Norther abated and slowly hauled into the Northeast Trade. Thus we spent our last night at sea, under a tropical moon and a rare sky made crystal blue by the clearing Norther.

Next morning, with a rig as crazy as any pirate hooker that Blackbeard ever sailed into Nassau, *Carlsark* swung into the colorful, one-time pirate haven and lowered her ragged mainsail and bizarre mizzen squaresail. But it was a good rig, for it had stood up under two gales and one cyclonic storm, and had driven *Carlsark* onward for 51 days over 3700 miles of February, March and April North Atlantic.

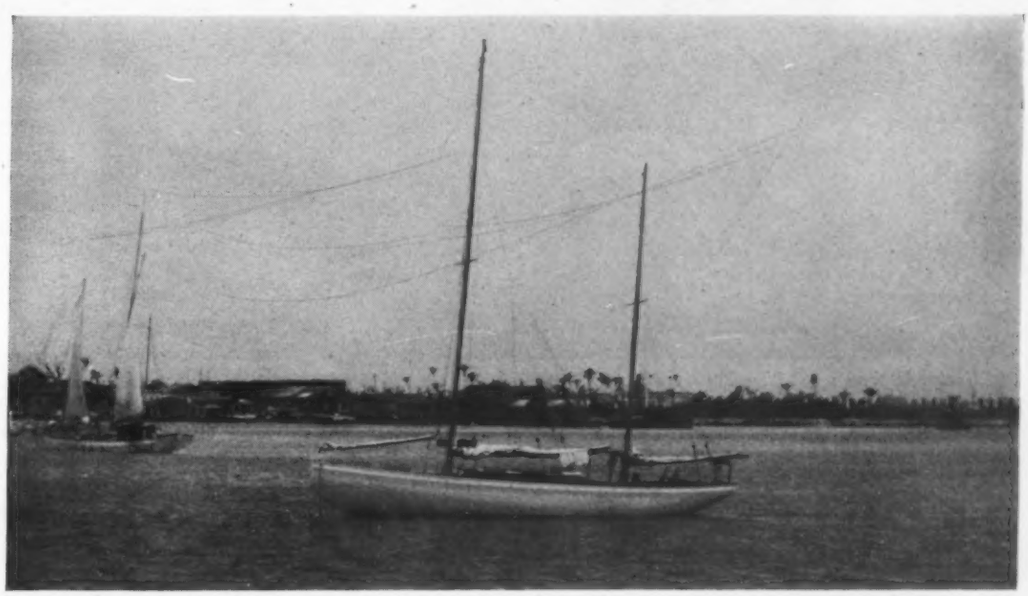
We did not expect much of Nassau, for we had gradually discovered that most of the well-known colorful

ports were far more colorful in imagination and in advertising than in reality. But Nassau exceeded every expectation. As we came into the well sheltered harbor, we could scarcely believe the opalescent colors of the water made by the reflection of the vivid azure sky in the crystal clear sea and vari-colored coral.

The quaint old fort flew the flags that signaled the entry of a sloop. *Carlsark* was technically an hermaphrodite brig aft end foremost, but the lookout, having no signals for such a rig, signaled her as a sloop. However, he might have flown the brig signal upside down. My mother had been watching these signals for many days, waiting for a ketch. So no one recognized *Carlsark* as her anchor was dropped into coral sand. However, the harbor master soon spied us, and, upon revealing our identity, he piloted *Carlsark* into the choice berth in Prince George's Basin. There we scrambled ashore and rolled in the direction of the nearest beefsteak and ice cream. But we were delayed somewhat by Nassau hospitality and a peck of mail brought by my mother. Then the goose was strung and remained hanging high for an entire month on that happy island of June.

Carlsark was completely renovated, and refitted with a new mizzen. She was on the ways for a week while a dozen Bahamian natives scraped off her extensive under water garden, scrubbed out the filth of Mediterranean ports, and painted her from truck to keel. Then the bill came — eighty dollars, not eight hundred.

When the May moon rose full, as only the tropical moon rises, *Carlsark* departed from the Isle of June for New York. It was on Friday, the 13th, and there were two ladies on board. My mother and Mrs. Pells, an English nurse, were the additional omens. Sailing *Carlsark* three times across the Atlantic was an insignificant accomplishment in comparison with the departure in the face of such odds. However, *Carlsark* was willing to undergo the acid test, and so we headed for the Gulf Stream.



"Carlsark" was refitted in Nassau and remained at anchor for three weeks in the harbor alongside numerous picturesque sponging schooners

The Northeast Trade gradually hauled to a southerly as we drew out of the opalescence off Grand Bahama Island and into the indigo of the Gulf Stream. The course was laid northward along the axis of the Stream toward Beaufort, North Carolina. As a result of following the Stream our run the second day out of Nassau was 205 miles, 100 coming from the current. And the third and fourth day ended with runs of over 200 miles, although *Carlsark* was only jogging at five knots before the balmy southerly. Up to this time the ladies had not even been seasick, so we dismissed our earlier ideas of unloading them in the event of encountering ill-fortune. Besides, we had taught them to steer so well that we were quite willing to let them steer all day long and usually well into the night. We let them cook, too.

On one of these nights I was roused out of my bunk by the approach of a Gulf Stream squall. As I jumped into oilskins, lightning streaked out of a black mass dead ahead. Mrs. Pells was steering her course right through the thick of it. When I reached the cockpit she made no effort to turn the tiller over to me. She seemed lost in the delight of driving *Carlsark* into the thundering squall. I sat down opposite her in the cockpit and said, "Doesn't this thunder and lightning and blackness out here on the open Atlantic make you fearful?"

"No," she said in her quiet English manner.

"Is it because you love the sea?" I continued.

"Hardly," she answered, "for the sea took my only child from me." And then, while *Carlsark* drove through the squall, Mrs. Pells unfolded to me her experience on board the *Lusitania* when she was torpedoed off Ireland.

She was accompanying her husband from British Columbia to England and the Western Front. They had delayed the journey until their baby should reach an age when he could be taken with them. When the child was three months old they booked passage on the fastest available liner — the *Lusitania*.

They were together in their stateroom when the torpedo sounded the death knell for so many. Fearful of injuring the baby in the jammed up passageways, they waited until the panic-stricken passengers had reached the deck. When Mrs. Pells and Mr. Pells, with the baby in his arms, reached the deck all the lifeboats had been lowered and the bow was already on its way down. They crawled up the inclined afterdeck, which was poised high in the air ready to make its final plunge, and there, huddled together, they awaited their fate.

After the *Lusitania* plunged to her grave, Mrs. Pells came to the surface of a sea strewn with wreckage and other human beings struggling to keep afloat. Some time afterward she was picked up by a lifeboat. Strangely, the hand of fate brought Mrs. Pells and her husband together. He lay injured in the same boat, but the baby was gone. They were taken into Queenstown by a destroyer. The baby was never found, and shortly after Mr. Pell's name appeared on the casualty lists — among the missing at the front. Mrs. Pells completed her story by adding that it made her very happy to be with boys

who were not much older than her own son would have been. So I took the tiller, understanding, then, why Mrs. Pells had no fear of the sea.

The southerly increased with the squalls, and on the fourth day out of Nassau it was rolling up a long sea. Our plan was to take the inside passage from Beaufort to Norfolk. At noon we turned out of the Stream and into the dull green seas off North Carolina. As we left the great blue river it grew cold and foggy. The fog prevented the taking of afternoon and evening sights. For a time we nearly altered course to round Hatteras, anticipating that the Beaufort Bar would be impassable in the increasing seas. However, with the knowledge that our landfall would be made in daylight, we continued on the basis of our dead reckoning.

"Carlsark" returned to New York on May 27th, 1930, just as the sun sank over Atlantic Highlands

At 5:30 in the morning, Dud, on watch, heard breakers in the fog dead ahead. The course was quickly shaped northward to parallel the beach. I had made allowance for three knots of drift, which seemed excessive, so we first thought we were south of Beaufort. However, in between the rolling banks of fog, we identified a Coast Guard station on the desolate beach and found ourselves twenty miles north of Beaufort. Apparently the Stream, blown by the southerly, was doing four knots instead of three. Continuing northward we kept in sight of the beach and decided to try Oracoke Inlet.

It was not difficult to locate the inlet, for its bar was a tumbling mass of breakers on both sides of the narrow channel. Slowly we sounded our way into the channel. Half-way through, when the lead gave depths of ten, nine and eight feet, we wished that we had gone around Hatteras. However, *Carlsark's* concrete keel, filled with 250 horseshoes, finally found its way into the sheltered water in the lee of the beach.

When we swung alongside the quaint old dock of the picturesque fishing village of Oracoke, we sought the proper authorities to clear our ship. The Coast Guard Bosun turned out to be the only authority, and he came on the run when he heard we came from Nassau. Up came the floor boards, and then, when everything but the engine was uprooted, he signed our manifest. He explained very courteously that it was his duty either to condemn us or help us. So we asked to be piloted across the Swash into Pamlico Sound. Although the Pilot Book gave only six feet as the controlling depth, we were assured that our six and one-half feet could get through. A local boatman came to do the piloting. He found bottom in the first hundred yards. The Coast Guard removed *Carlsark* and then proceeded to tow her through the three-mile channel. Despite our shouting, they opened their throttle wide with the result that when we found bottom again *Carlsark* remained until the following morning.

In the morning, with the aid of a foot of tide and the burning of several hundred gallons of Uncle Sam's fuel, the Coast Guard managed to skid *Carlsark* across the Swash into the open reaches of Pamlico Sound.

On the way north through Pamlico Sound toward Norfolk, we stopped at Roanoke Island. The historic island was fragrant with wild gardenias, honeysuckle and pine woods. Oysters were plentiful, even in May, and the natives presented us with several sacks of the best. From Roanoke we sailed into the thick of the North Carolina pines, as *Carlsark* motored her way through the Chesapeake and Albemarle Canal. One evening we anchored with spreaders hidden in the overhanging pine boughs and stepped ashore from the deck into a sweet pine forest.

Next day, while motoring along, the engine came screeching to a stop when the starting chain jumped the gears. But the first canal tug to pass gave us a tow without even being asked. Not only did he tow us, but when we suddenly discovered that the dinghy had parted company a mile in our wake, he docked his barge, turned around and went steaming full speed to retrieve it. The obliging tug took us sixty miles to Norfolk where sail was set as we went through Hampton Roads and around Cape Charles.

Outside we met a brisk northwester. *Carlsark* nosed into it close-hauled and ate up the coast to Atlantic Highlands in two days. As the sun sank over the highlands and the twin lights flashed their welcome home, the sky to the north reflected the lights of the city to which, as *Sowitasgoht*, *Carlsark* had sailed 6000 miles across the Atlantic in 1923, and which had called her back again after 13,000 miles of sailing over blue water. New York seemed to glow its welcome.

Next morning, as the smoky haze lifted above the skyline, *Carlsark* slipped under Brooklyn Bridge, and with the few stray puffs that found their way between the windowed canyons made her way up the East River with the current. Off the New York Yacht Club we were welcomed to our home port by a tug boat captain. Passing close alongside with his tow, he slammed down the window of the pilothouse, stuck out his head and told us to take our toy sail boat out of the channel and back to the bathtub where she belonged.

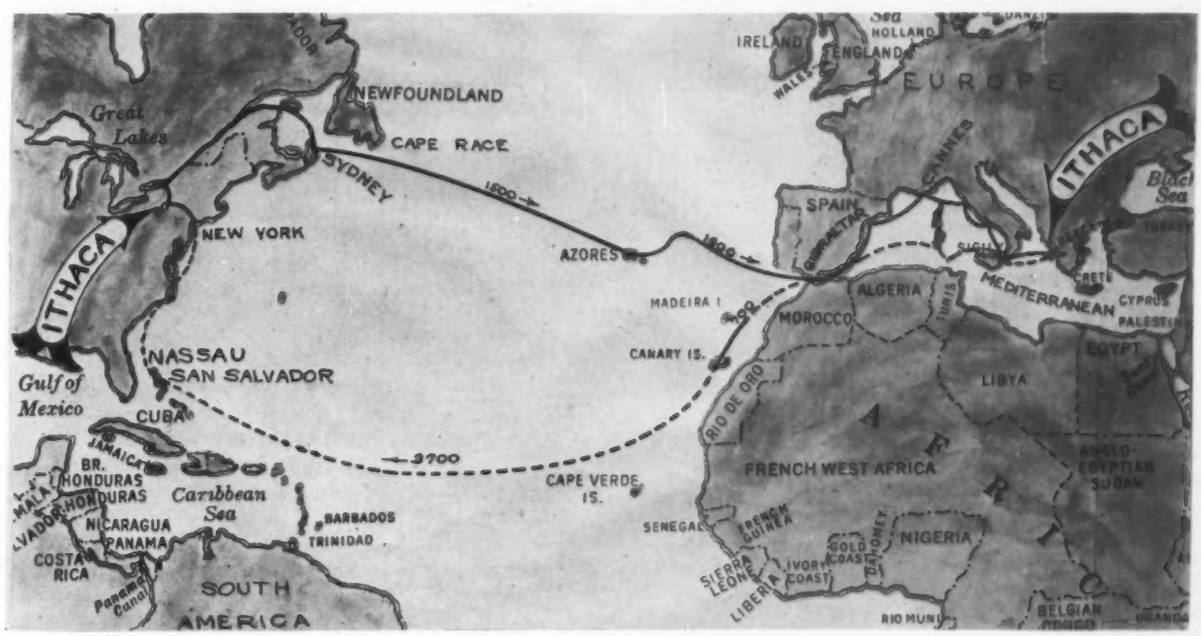
When *Carlsark* passed under Hell Gate Bridge she completed her circumnavigation of Long Island, although the circuit which enclosed the island was 13,000

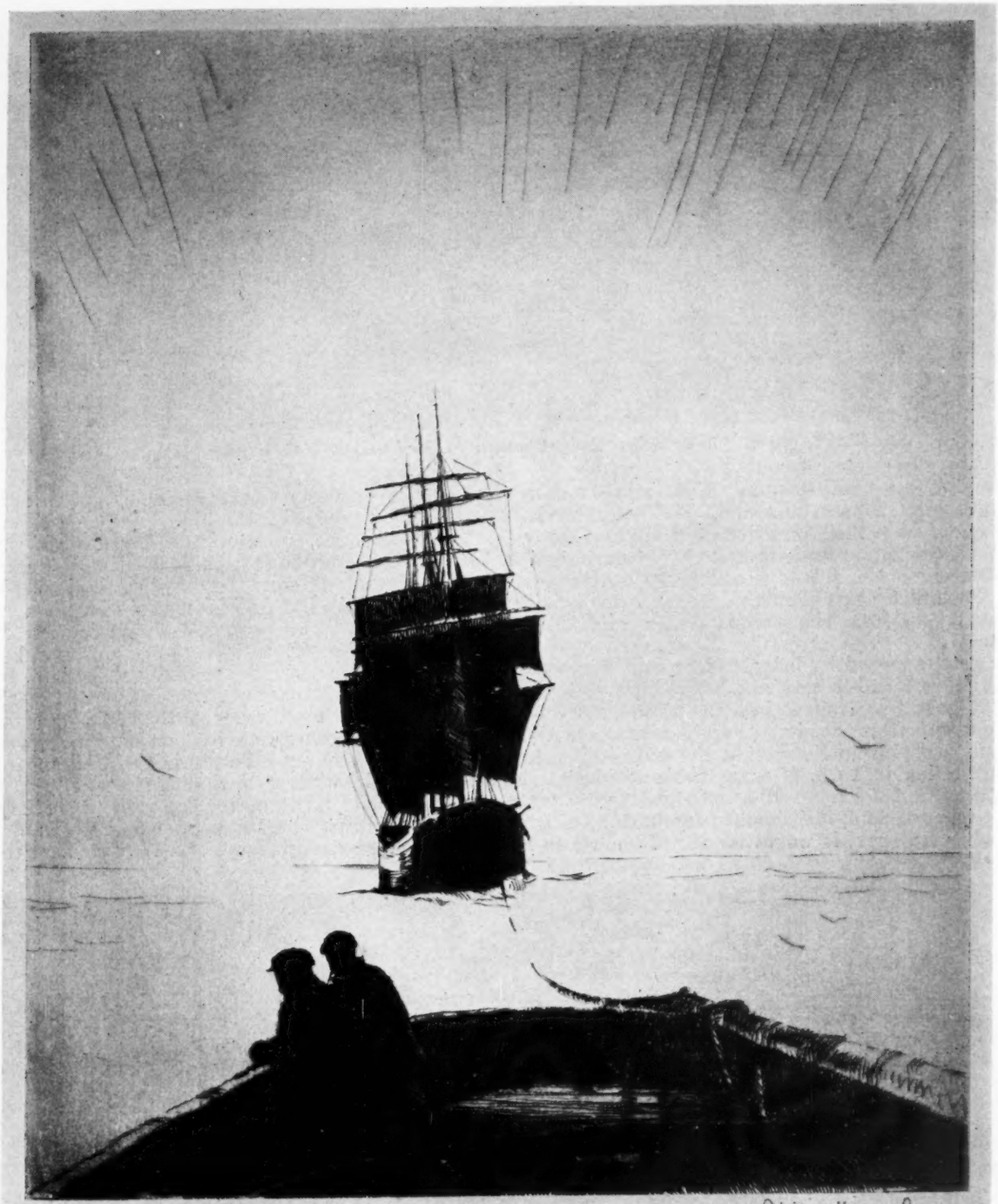
With 13,000 miles in her wake, "Carlsark" returned to her home port at the Bayside Yacht Club

miles long and we had seen only Long Island's shores along the East River. A year and a half before we had sailed north from Hell Gate into the Hudson toward Ithaca. Dodging several freight car barges which were bearing down sideways on us, we drifted eastward toward College Point, catching the familiar offshore breeze from the Corona dumps and Riker's Island.

Whitestone passed by bringing memories of another gallant ship which had served Bill Nutting so well. And then the hook was dropped in home waters, scarcely a hundred yards from the pier at Fort Totten where Alain Gerbault had tied up *Firecrest* at the end of his memorable crossing in 1923. If there was any inspiration which sent *Carlsark* across the Atlantic, it came from those two men. And, if I should tell the story of why *Carlsark* came back, it would be one of tribute to all those who made our going possible, and to my shipmates and to a good little ship.

Two days later, on Decoration Day, *Carlsark* was welcomed home by the Bayside Yacht Club but about the same time we were told that we were not in the United States and were liable to heavy fines for not reporting our entrance. The Customs, Immigration and Health authorities thought they had run down a band of smuggling aliens carrying the bubonic plague. In Oracoke we understood that the Coast Guard search had cleared us, and I had reported to the local doctor. But because we had not reported on entering New York Harbor we were not officially in the United States. It took an entire week of unwinding red tape, but, finally, after the chief rat inspector had made a special search for bubonic rats in *Carlsark*, we were declared in the United States and in New York. We were back to earth.

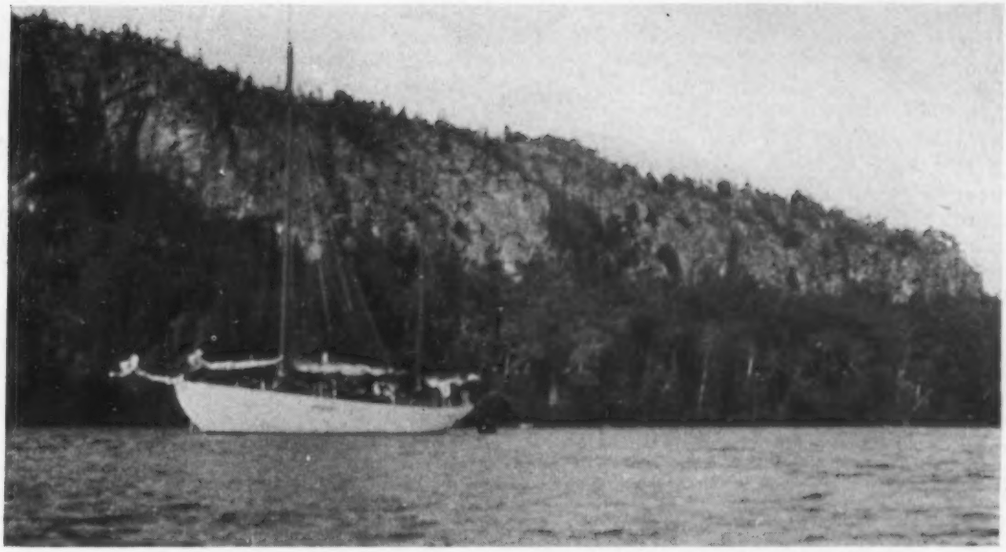




Courtesy of Schwartz Galleries

IN TOW

From an etching by Philip Kappel



In Otter Cove, where "Glencairn" lay, the fire-tortured rocks looked like piled cordwood

Sampling Superior

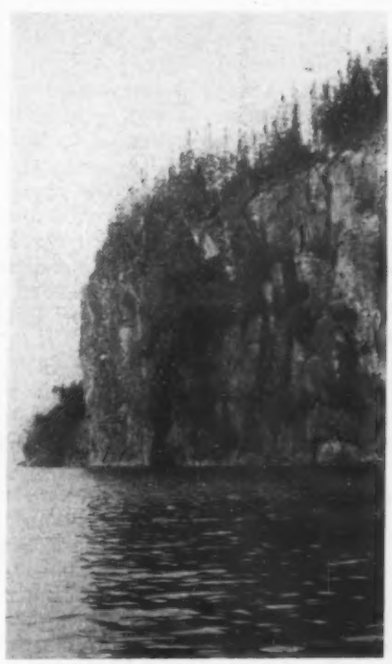
Part II—Wilderness Wanderings on the Greatest of the Great Lakes In the 75-Foot Ketch "Glencairn"

By C. H. J. SNIDER

THE youngest of our afterguard, aged twenty, had developed a badly infected hand, from a finger-blister got in a racing shell far away at Montreal, before he joined for *Glencairn's* Lake Superior venture. He was game, but manifestly suffering a lot, with worse to come, for his glands had begun to swell. So as we breasted the lake rollers and left the sylvan gem of Brule in the wild woods for Michipicoten Harbor and a doctor. Iodine and other antiseptics on board had not done the trick.

It was only eleven miles. Michipicoten Harbor is one place, on the mainland; Michipicoten River another, two miles away, where the fish trade centers; and Michipicoten Island something else yet again, a large, lonely kingdom twelve miles off the north shore of Superior, but as isolated as Britain used (to avoid splitting the infinitive) "splendidly to be." We shall come to that later: as our first concern was the mainland and a doctor, considerably later.

Still a south wind. It blows southerly most of the time in Superior in the summer; northwest in the fall and winter. We went into the flinty bosom of Michipicoten Harbor two hours after leaving Brule, accompanied by rain and fog, which failed to obliterate the rocky eminence of Point Perkwakwia and the little lighthouse perched upon it. The harbor inside the point was a biggish place. It had a steel bridge for unloading coal, which Duggan's firm had built.



Port Coldwell's rocky entrance rose to twice the height of "Glencairn's" lofty truck

Besides this product of the Dominion Bridge Co., the harbor boasted one store, six houses, a post-office that made up its mails twice a week, a railway station used scarcely oftener, and a district voter's list of 46 persons. We had inside information on the latter point from the returning officer, who was also the railway manager, and the first man we interviewed on coming ashore.

Doctors? Plenty of them. Several at the Sault, 125 miles off by beeline; and several more at Port Arthur, 225 miles in the other direction; none in between. Nearest road or railway, thirty miles off, except for the branch line of the Algoma Central; and there would be a train on it, connecting with the main line, tomorrow.

"Well," we expostulated, "what happens if anybody is sick?"

"They mostly get better," said the general storekeeper encouragingly. "There's a real genuine trained nurse over at the point, the wife of the lighthouse keeper, and she doctors everything from twins to tic doloreux."

Thither we took our patient, rowing across to Point Perkwakwia in a mizzling rain. The keeper's house was full of guests and growing children, but clean and cozy. His wife was one of those capable women God sends to make life livable on the outer fringes. She feared blood-poisoning, but thought we had come in time. Hot fomentations of linseed were her immediate prescription;

patient not to be moved until the swelling abated. She began to make a room ready for him right away. It would be next afternoon before the train pulled out. Perhaps he would be fit to travel by it; perhaps not. If he could, he would connect with the main line after several hours, and in another 24 hours he would be in Port Arthur or the Sault.

Old lighthouse and residence at the entrance to Quebec Harbor, Michipicoten Island

We left him there, with a book in his well hand, much more cheerful than we were. Fortunately there was plenty of linseed meal in the place. Dolefully we overhauled all his belongings when we got back on board and tried to pack his bags. If he had not had silk shirts galore, zephyr socks, and mesh underwear, I believe we would have wept. They made us laugh and look at the thermometer, which stood at 52 in the fog this late June day. We had all been doing some furious thinking since the sentence, and as the last bit of celanese was folded we burst out in chorus: "If that boy can be moved tomorrow let's take him back aboard and land him at a main line railway port ourselves. We can get him to Coldwell or Jackfish or even Port Arthur as soon as these jerkwater trains can, and twice as comfortably. If all goes well we can finish his cure ourselves, on board."

So, later in the evening, we rowed back through the rain, and found the swelling reduced, and our bonny boy looking much more like himself; and his nurse hopeful that he could be removed after a night's rest. We announced our program, it was approved all round, and next day we carried it out. At least we got our patient aboard, well ballasted with linseed meal for poultices and voluminous instructions. Rain and mist hung on, and we fished a little, and explored Clergue Island, with its broken drawbridge and wooden fortalice, the summer home of the promoter who galvanized the Sault into life thirty years before. And then we played solitaire and read Masefield's *Sailor's Garland* and turned in.

Full fed on fog and fish, and with all our gear heavy with rainwater, we hove up at four o'clock in the morning and stood out while a strong nor'easter aloft tore the curtains of the night away in purple patches. Low down the wind was still light, and the lake was like lead. With the rising sun the wind descended, coming down in heavy puffs from east and northeast, and along Superior's northern shore we flew. We were doing a good ten knots under lowers, with sails at first to port, but between Michipicoten Island and the mainland we had to jibe over, to keep from climbing the giant steps of Nanibajou. We were going to visit the island later. Meantime, with us 'twas westward-ho.

It was the first time we had seen the sun for three days, and we gloried in it. Standing up in the air off the lake it was perishingly cold, but to lie flat on the painted deck in the sun was like warming one's self before an open fire.

We were up to Point Isacor by breakfast time, 25 miles on our way, and doing eleven knots. Eagle River was just east of the point and Ghost River to the west. Unfortunately, Joe was reticent as to the why of its name. Then we passed Pilot Harbor, with a few deserted buildings showing where the pilots used to live in the old days of railway construction, when supply ships did a heavy trade all along the shore.

Like most Lake Superior winds, this one backed against the sun and kept on backing until we were abreast of Otter Head, a good bold promontory. So we tacked, being able to fetch the high white lighthouse on Otter Island 65 miles from where we had started. Standing in close so as to avoid a big bare rock, just awash, half a mile from the Head, we started sheets again and ran in past Otter Island and another, into a deep cove, about a mile long, a quarter of a mile wide at the widest, with 32 feet of water in the entrance channel. Bastions and ramparts of red granite bordered it, fringed with brilliant green birch and mountain ash and dark spruce. This was Otter Cove; wilder than Brule, and in that way more appealing, but less of a sylvan surprise. We anchored in five fathoms, and after lunch replenished the larder with half a dozen lake trout, of from four to six pounds.

Exploring the cove, we found a lovely torrent pouring in on the north side among the trees; and three miles to the west a waterfall ninety feet high thundered its way into the lake, with a three-forked tongue at its base. In the distance these cataracts gleam white against the dark shore, and show up like lighthouses.

When we left Otter Cove "all round about the coast the languid air did swoon," and the scenery was as dreamlike as ever Ulysses beheld in the land of the lotus eaters. It was a perfect summer day for Superior — air temperature 50 at breakfast and 60 at noon, yet the bright sun hot as flame wherever its rays were reflected. Hence mirages. Michipicoten Island, far, far distant, sprouted two mountains wearing mortar-board caps. The lighthouse on Otter Head soared to huge proportions. We were puzzled to account for the Michipicoten mortar boards, until we observed other distant headlands putting them on. The explanation was that the mirages duplicated the original image, capping it with itself reversed, so that the wide-based reflections of heights of land were at their widest up in the air. Near Otter Head the fire-tortured rocks looked like high-piled cord wood.

We were working westerly ever since leaving Michipicoten Harbor. We had long done with the east shore of the lake, and we passed the most northerly point at Peninsula Harbor and Port Munro, which bask in 48° 55′. Nipigon Channel and its river are really north of that again, but cannot fairly be counted part of the open water of Superior.

At night we put into Port Coldwell. It would have been better had the place been called Cold Well, but it was named for a railway engineer, who put the line through here in 1884. The hamlet was anything but pretty — a railway station, a few section-men's cabins, an untidy wharf, and a couple of fish tugs — but the harbor was another gem. To starboard, as we went in, stood a solitary spruce on a low point, like a sentinel unrelieved. To port, a splendid granite cliff, plumb as our mainmast and twice as tall. Outside, giving perfect shelter to the deep inlet, Detention Island, high and wooded. Beyond that, a cluster of rocks, the Slyboots among them, and Pic Island, 700 feet high. When the sea began to break on them it spouted and roared like the Atlantic on the Maine coast; inside, the shimmering reflections were scarcely disturbed.

Coldwell offered the best — or the easiest — fishing of all the places visited, fourteen fine lake trout in less than two hours. In our prowl for the trout we explored a little creek, and there were witnesses of one of the curious tides or seiches for which Superior is famous. Instead of having to row hard against the current, we found ourselves floated rapidly upstream, faster than we wanted to go. Hanging on by one of the bushes, we saw the incoming water mount the bank and obliterate a sandspit, rising twelve inches in as many minutes. After a little while came slack water, and then the ebb; but before we got out of the creek it was flood tide again, the water flowing in from the lake at three- or four-knot speed. "High" and "low" water periods on the Great Lakes are irregular, but average about seven years apart. Perhaps they are connected with Nanibajou's breathing, and this, again, may explain Superior's antics. All the lakes have these seiches, but on Superior they are frequent. Elsewhere they are rare.

"Let's call it a day." The skipper and mate decide it is time to light up after two hours of trolling

Much missed by all hands, one of our evergreen afterguard had to leave us at Port Coldwell. It is one of the great advantages of Lake Superior that although it is ringed with the forest primeval, if you can make a port where the railway skirts the shore — as it does frequently in the northern parts — you can hop it to civilization in a Pullman with all the fixings every few hours. Elsewhere you are out of luck.

We received a wire from him next day, quoting 82 in the shade — and shivered. In Port Coldwell, where Superior scrapes the fifties of north latitude, just a fortnight before this the fish-tug men had had to break a thick skim of ice in buckets filled overnight for their morning ablutions; and at the time of our visit they were rejoicing that the mercury never fell lower than forty now, and the time of June frosts seemed to be over.

Detention Island, guarding the mouth of the harbor, was aptly named, for between rains and fogs we got to know it well. Joe Laford, our pilot, enlivened our sojourn with some thrilling tales.

When we got away from Coldwell we went on for Jackfish, still to the westward, our last remaining contact with the railway; for the line here once more left the shore, and unless we went into the intricacies of the Nipigon Channel we should not pick it up again until we returned to civilization at Port Arthur. Jackfish lies in Jackfish Bay and is the most metropolitan of all the places visited. It has a concrete coal wharf, and a 3000-ton steamer, the *Bricoldoc* of Fort William, unloading at it. In one arm of its deep Y-shaped harbor lay the Dominion government survey steamer *Bayfield*, on the same mission which brought the original Admiral Bayfield into these waters a hundred years before. It was his good work which provided all the Superior charts of last century — and part of this; survey work done in ship's boats and little wooden schooners built on the lake. Jackfish has a railway and telegraph station, a post office that works every day, a pulp dock, a boarding house, a general store, and perhaps a dozen houses. We could even get oranges, and we replenished our supplies.

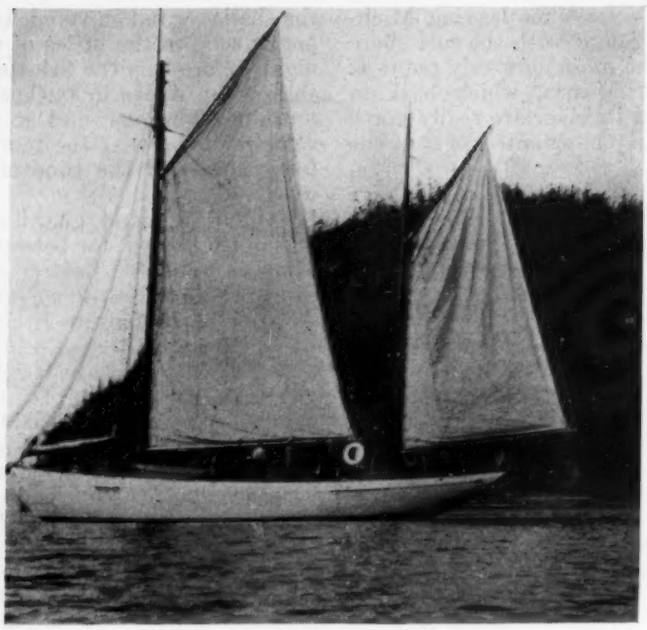
Making for Jackfish we encountered the worst looking squall I have ever seen. It was off the Slate Islands, and the whole heavens seemed made of the material which gives the islands their name. Sea and sky were weirdly contorted blotches of gray and purple. It looked as though some unseen volcano was about to burst. And over the land a second squall, marked by dead white clouds, was working up.

Then we blessed the ketch rig. We hauled down the topsail, fisted the jib, got it well gasketted out on the horn, and then handed the mainsail. As we were passing the gaskets it began to rain, and it rained hard. It blew, but there was nothing marvelous in the blast. The white squall and the purple squall had met, and as they were about equal in strength they wasted their wind, and all we got was a wetting. We took it most comfortably under mizzen and staysail, then furled everything and steamed into port, with the wind screaming. It was right out of the harbor, and the water was smooth; but the place was so deep that we had great difficulty in catching

the bottom, and finally let go in ten fathoms, a hundred yards at most from shore. We rode comfortably to two anchors with thirty fathoms out on each.

Numerous islands give Jackfish perfect shelter. The cork is put in the bottle, so to speak, by St. Patrick's Island. Coming from the eastward you go around it, to make sure of deep water.

We celebrated July 1st, Dominion Day, by flying our newest blue ensign. The *Bayfield* did the same, and added all her colors, and the *Bricoldoc* flew her red, so the port was gay with bunting. Having picked up another member of the afterguard from Montreal by the evening train and finished taking on stores, we hove up that night and marked "Farthest West" on our Lake Superior chart for the year. Our next destination was Michipicoten Island, on the way home.



Drying sails in Port Coldwell

We went off to a slow start, a dead calm for the first watch, which necessitated the engine to keep us clear of St. Patrick; but the sky spectacle made up for the tedious endurance of the cold.

The night before there had been a splendid double rainbow and a long clear green twilight, lasting till eleven o'clock. The twilight was as generous this night, and when it finally faded the whole northern sky was filled with the pencils of the aurora borealis. We had been getting good concerts on our cabin radio, but the northern lights ended that. Maybe it was fancy, but their whizzing and whishing and crackling seemed quite apparent; something one could see, or feel, rather than hear. They worked pale green and pale blue searchlights like the fingers of a hand, and then settled down to a broad low *arc de triomphe*, as shown in the most respectable geographies. The performance went on long after the watch had been called at midnight.

All next day we skimmed over a pale blue lake, sometimes ruffled by catspaws, sometimes smooth as the cloudless sky above it. Always wind, since sunrise, and a fair wind; sometimes for the spinnaker, sometimes for the balloon jibtopsail. Our spinnaker, with hanks on the luff and a straight foot, served both purposes excellently. It was delightfully warm in the sun, cool in the shade. At noon the thermometer registered 100. At night it was down to 40. We dipped it in a bucket and it shrivelled to 39. But, once and for all be it said, Lake Superior presents little discomfort to the sufficiently clad. Hot or cold, the air is crisp. You drink great gulps of it. If three suits of clothes cannot keep you warm, put on a fourth. You can always peel off — if you have enough to start with.

By sundown we were well in sight of our island, and realizing how big it was. We had come some 90 miles, and had still plenty to go. The island was sixteen miles long and seven wide, and, coming from the northward, we had to sail around it to our haven on the south side.

Sunset was a richer treat than the aurora of the night before. Sky clear as champagne, a flood of scarlet and amber, from south of west to east of north; water a marvelous lapis lazuli, lozenged and patterned with alternate flecks of deep orange and bright clear yellow; the island jade green, with all its rocky faces turned to a tender old-rose. Lake Superior may be mean in a gray mood, but when in high spirits she flings color with no sparing hand.

And high and higher rose the silver sickle of the moon. And we saw Venus sink, from a crystal globe to a ruby spark, and vanish in the western wave.

By this time, frigid but exalted, we were rounding the western end of Michipicoten and coming under the rays of the 17-mile flasher on the grand natural mole formed by Davieux Island and a dozen other rocks and islets — the Stack, the Ship, Green Isle, the Breeders, and so on. These parallel the south face of Michipicoten Island and form the outer defences of a fortress impregnable against all the winds that blow.

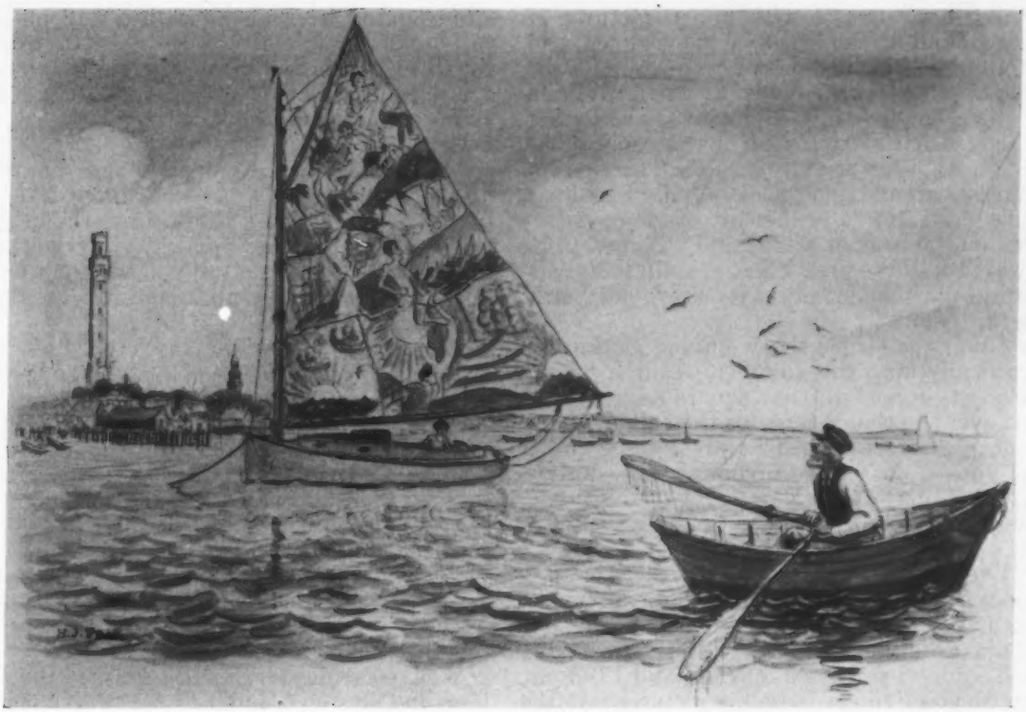
Twenty-two miles to the southward, but looming large as a Great Lakes freighter in the mirage and moonlight, the tiny sandspit of Cariboo Island sent an answering flash from its lighthouse to Davieux; two lonely torches in a wilderness of water.

As we rounded Davieux two steady pencils of golden light came down to us on the still water from the black band of the main island of Michipicoten, right under the high pole star. These were the range lights, to take us into Quebec Harbor. The channel was well buoyed and the range brought us straight into a long rock-ringed lagoon, shaped like a stubby "T." The cross part was two miles long, the upright about half a mile. An inner barrier of rocks and islets, inside of lofty Davieux, doubled the security. There was room here for a fleet to ride, in seven fathoms. Great Lakes freighters more than 300 feet long choose the deeper water between the rocks and Davieux, for it gives them more room for the eight-point turn; and they often use the anchorage for refuge from wintry gales.

Quebec Harbor was the name of the silent T-shaped haven. Some steamer *Quebec* must have had adventures with the massive island, for there was a Quebec Rock off the northwest end. Once the place was a hive of activity, with a copper mine going five miles inland, and a large wharf for contractor's plant and supplies. But all this was now over.

Michipicoten was wilderness well-nigh perfect. Plenty of fish for us on every reef, though they did not always bite. Off the east end of the island was the best place. Here a lake trout weighing 52 pounds had been hooked and landed the week before our visit. Two streams poured into the harbor, and in the sandy bed of one of them the brook trout lay in hundreds. They disdained fly, worm, hook, spoon and dip net. Mother ducks led

(*Continued on page 130*)



"Believe me, it was a sight!"

An Artist With the Needle

By ALFRED F. LOOMIS

"YOU call me an artist with the sail needle" — old Captain Haulaway was the speaker — "and I guess maybe I am. More ways than one. Like the time I went into partnership with that painter Claire — what is her name? You know her, number one lady in the mural painting line. Modern, super-realist, futurist. And I put her there. You haven't heard the story? Well, stop me if you think every word of it ain't true." So Captain Haulaway set aside the torn jib he was mending and shot the yarn.

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That summer (said Captain Haulaway) I had a sail loft and boat yard down Massachusetts way. The port was overrun with artists, like, and times being hard I let out my sail loft to this Claire Jones. That was her name. No wonder I couldn't think of it. Pretty. Slender. Full of life. Young. She used it for a studio. I mean the sail loft.

And times being hard and work slack I used to sit up there and watch her paint. Then the other artists would come in and we'd talk about Claire's art. Now as I understand it, artists express themselves different ways. Some work small on what they call thumb boxes and make the big money because paints and such don't cost 'em much. Then others paint medium size canvases and they're generally the craziest ones, with skyscrapers upside down and women with no faces and fourteen eyes and the like. Or just the eyes and no women. And once in a while there's a good little old-fashioned girl, like Claire, that only paints in the classic style on pieces of canvas four feet by six or thereabouts and puts down what she sees. If it's clouds you can recognize them. And if she painted ships in my sail loft they were ships with bows and sterns, masts, and all the rigging, with none of these lightning flashes and pyramids to make you think you were thinking of ships. You see how I mean? Then when Claire painted human figures they had arms and legs in the right places and you could tell right away by looking at them that you didn't have the delirium tremens. Just an old-fashioned artist, like I say, painting pictures that looked like something.

But the other artists in the colony that used to come in to the sail loft couldn't see her pictures for sour apples. "No soul," they would say. "Nothing left to the imagination." "Use a camera and save time."

"Never you mind," Claire told 'em one day. "I paint what I see and I've never yet seen a nude woman with three legs and one arm and a face in the middle of her stomach."

I thought that would hold 'em for a while, but one of them came back with, "You're off on the wrong tack, young woman. You know that study of mine, 'Leap Frog in the Dell'?"

"That monstrosity!" said Claire, and actually blushed. "What about it?"

"Oh, nothing, except I sold it for a thousand berries to a modern bootlegger from Providence," said this feller. "That's how monstrous it is."

"Well," said Claire, "I'll never prostitute my art with junk like that. It isn't real, it isn't lovely, and it isn't Art."

"And you'll die in the poorhouse," said this feller and walked out on her.

Fact was Claire looked like she was bound for the poorhouse by the end of that summer. She had filled

twelve of these big canvases with pretty pictures of people lolling around on the beach, of ships at sea, and of some of the swellest cloud effects I ever saw. And not even a nibble from any of the big bootleggers. With all her money going out for paint and canvas she hadn't enough for food. I felt sorry for her, I tell you. So one day in September I asked her why she didn't turn one of these big canvases around and prosti — (only I couldn't say the whole word to a lady) her art by doing something modern on the back of it. She said, "Never, Captain Haulaway, I'll starve first. There are still some people in the world that like beautiful pictures, and I'll go on painting for them."

"But they ain't the people that's buying pictures — if I've learned anything this summer," said I. "Why not try a green five-legged calf, or a square-rigger sailing upside down over the clouds, just for the hell of it?"

"Never, never, never!" said Claire. "I won't do it. But I want you to do a little favor for me, Captain Haulaway. Will you?"

I promised to.

"Well, it's this fall exhibition at Provincetown," said she. "I've got to show my work there, and I haven't money for carfare, not to mention expressage. Will you hitch up your little catboat and take me over?"

I looked a little dubious-like at all those twelve big canvases and said, "I promised, ma'am, and I'll do it, but how are we going to get these big pictures into the little cabin of the *Hopsit?* They won't fit."

"That's easy," said Claire. "I'll take 'em off the stretchers and roll 'em up. The stretchers come apart and we can tuck them away too. Can we start right now?"

Not to make too much of a mystery out of it, we started that afternoon, all the canvases stowed away. At the last minute I happened to see a big ball of sail twine and tossed that in, too, along with the sandwiches. Now this little cat of mine was a fine boat, but that particular season she had one bad feature. Her mainsail was old and thin as paper. I'd mended it several times where it had ripped from luff to leach, and there wasn't much good in it.

Anyway, there wasn't enough good to stand a hard jibe in a squall of wind, and when the squall came up astern of us Claire had the tiller and she jibed. You being a sailor I don't have to tell you how quick that old sail let go and said goodby. Pouf! Just like that, and nothing but a few shreds of cloth along the head, luff, and foot to tell us where it had been. And then the wind came in really hard.

"Well, Claire," said I, after I'd secured the boom and got the gaff down on deck without killing anybody, "I don't have to tell you you made a slight mistake. Rising gale blowing us offshore and Europe the next stop. What are we going to do about it?"

"I'm awfully sorry, Cap'n," says the girl, her lip trembling, "I guess I'm a modernist at the tiller. Couldn't we just drift on to Provincetown?"

I looked at the compass. "No ma'am," I said, "we'll go by the cape with five miles to spare."

"But the rum chasers will pick us up before we're blown to sea," said Claire; "won't they?"

"Let's see what day this is," said I. "Monday. Nope, Monday's the big day for landing liquor these parts and all the chasers are up the other end of the district. If it was Friday, when the rummies work the other beaches —"

"Then I'll call myself a failure and jump overboard," said Claire. But I grabbed her and wouldn't let her. "Look here," said I, "there's all those painting of yours down below — about 288 square feet of canvas, as I've often figured it. And me with a ball of twine and a palm and a couple of needles. Say the word and we'll get to Provincetown in time for the exhibition."

"What!" says she, sitting down in the cockpit and giving me a terrified look. "Cut up my Art, my Soul, to make a sail? No!"

"Well, ma'am," I argued. "I won't have to cut 'em up much. Just a little here and there, like, and what I borrow from the leach I'll put into the belly of the sail to give it a proper flow, and maybe trim the head a bit to peak up the gaff. Anyway, if we don't have a sail we might as well both jump in and save us the trouble of starving to death."

"All right," says Claire, bravely. "I got you into this mess and I'll help you out of it. Only don't let me see you mutilating my art."

So she lay below and I got to work, and in case she might want to come out on deck I sewed with the painted side of the canvas down. And after a while I forgot it was paintings I was sewing together to make a sail and trimmed here and fit there like the artist with the needle I be. Night came on and I worked along with a hurricane lamp beside me. I had to work fast because the wind was blowing hard all the time and I knew if we had to beat back against it the sail wouldn't hold together.

Well, come daybreak and I finished the sail and bent it on and hoisted it and it fit pretty as a picture. But we fell away on the starboard tack, wind abeam, and sheet well eased, and it happened that on that tack the back of the pictures was toward me and I couldn't see 'em. From the cockpit the sail looked like any sail, put together kind of funny, but cut well. The only way you could tell it was paintings was by my thumb marks here and there in red and blue and yellow where I'd got into paint that wasn't quite dry.

So you see Claire came on deck and said she'd had a terrible dream and dreamt that to save her soul from hell she'd gone modern and prostituted her Art, and now what was she going to do. And I told her so far as I was concerned I'd been working on deck all night making a sail.

"Oh yes, the sail," she says, still half asleep. "I dreamt we were going to Provincetown to put my canvases in the fall exhibition and to get there we had to sew them together and make a sail. And what an ironic joke that would be. 'Artist's life saved by destroying her summer's work.' Like eating your model to have enough vitality to go on painting."

"Ma'am," says I, startled like, "you sound like a cannibal. Sure you ain't still dreaming?"

"I was thinking of still life," said she. "Painting apples and such."

"Well, ma'am, you'll find an apple or two below, and what do you think of our new mainsail?"

"It's fine, except for all the paint marks. How'd that happen?" Then she woke up and realized she was looking at the back of her paintings and nearly had a fit. However, I called her attention to what a pretty sail it made, and how the tall monument at Provincetown was looming up on the port bow, and that it was going to be a fine day after the storm, and that I'd give her some canvas from an old winter cover I had, and let her have the sail loft rent free. And feed her apples whenever she felt hungry.

So she cheered up and we sailed into Provincetown and rounded to and anchored off one of the long piers. As the wind had gone flat by then I didn't lower the sail right away for fear of hurting it more than need be, but started unlacing it from the boom and cutting the

stitches where I'd sewed the pictures together. It happened I was working on the back side of the canvas.

Well, the steamer from Boston came in just then and before she was made fast to the pier a passenger on her yelled out, "Hey, you on the sail boat. What are you doing with that knife? Stop it at once."

I looked under the boom and saw where the shouting came from and said, "Stow your jaw tackle, if you're talking to me. This is my boat and I do what I like with her."

"That's sacrilege," says the feller. "Stop at once and I'll give you $500 for it."

I can think quick in a business deal so I decided to let him have my *Hopsit* for the money and said, "Sold. But the sail doesn't go with her."

"I don't have to tell you how quick that old sail let go"

"I don't want your damned old tub," said the feller. "Get in your dory and come over here. I can't go there."

So I brought the dory alongside and put a capstan bar in it and said to Claire, "You wait here while I go over and talk to that feller. Sounds to me like a maniac and no use taking chances." So I rowed away from the port side of my *Hopsit* toward the steamer and as I got a little distance from the cat I saw the painted side of her sail the first time. Believe me, it was a sight.

Down along the foot of the sail were four cloud effects, with the sun rising in two of 'em and setting in the other two, but with a naked female figure pieced into the middle, like she was diving into the boom. Then along the middle cloth was a picture of the *Constitution* and alongside her a clipper ship upside down, with half a male figure between her and the next painting, which was regatta day at Marblehead, ending off with a whole fleet of yachts upside down. The top cloth was the worst of all, being cut and mutilated pretty bad, with bright yellow sand and arms and legs lying round about, and one very handsome female figure with a couple of feet growing out of her ears, and the bow of the *Constitution* balanced sort of sideways over the palm of one hand.

I kind of blinked and stopped rowing, but the feller on the steamer yelled, "Don't stop. Come on." While off the bow of the steamer on the pier I heard another feller shouting, "Come this way!"

"You next," I said to him, over my shoulder, and rowed up alongside the steamer. "Well," said I, "she's my boat and I never yet heard any law against painting sails the way I like 'em. What about it?"

This feller — I learned later he was a big art dealer from New York — was trembling all over. "Let me into your dory," he said, "and I'll tell you all about it."

"No you don't," says I, sheering off and holding up the capstan bar. "Tell it from here."

He lowered his voice. "I'll give you $2000 for your sail right here and now." And he started to take out his pocketbook.

"Not so fast," said I, rowing over to the pier. "There's another customer wants to speak to me."

When I got there this other feller was panting like a St. Bernard dog. "Who did your sail?"

"Claire Jones and Captain Haulaway."

"Who are they?" he asked, perplexed.

"Ultramoderns. She does the brush work and I'm Haulaway, artist with the needle. That all you wanted to know?"

"What did that feller say to you?"

"He offered me $5000 for the sail — and no questions asked," said I, rowing away again.

"Make it six. Come back here."

But I rowed around to the steamer. "There's a gentleman there wants to give me $10,000 for my boat, sail thrown in," said I. "Any objections?"

"Of course I've got objections," says this first feller, leaning down and shoving a slip of pink paper in my hand. It was a check for $15,000, made out to cash.

"Any good?" said I.

"Certified," said he.

"So it is," said I, and shouted to the other feller, "Can you beat $15,000?" He shook his head.

"All right," said I to the art dealer — I wish I could think of his name — "get into the dory."

On the way to the *Hopsit* he sat on the stern thwart and gurgled — "Oh, the poetry of it — the imagination — the soul. Those feet coming out of the head of the nude. Why doesn't every artist see that feet grow that way? Like Minerva springing rough shod from the head of Zeus. And the vessel's bow in her hand — the symbol of Columbia and the ship of state — the proper suggestion of romanticism. And the clouds in the foreground where they ought to be and the inverted ships. The sublime disregard of perspective. Fantastic, some might say, but sheer daring. With the dismembered arms and legs on that beach. How did the artist come to that?"

"Dead reckoning," said I.

"But," he went on, "the crowning touches of all are the bold needle stitches and the thumb marks over everything. Matisse was not in it with this genius. No, not even Pecabi."

"You'll find thumb marks on the back of the picture too," said I. "We work thorough, Miss Smith and I."

Just then we came alongside *Hopsit*, and Claire reached out her pretty hand to take the painter — I mean the dory painter. "Claire," said I, handing her the certified check for $15,000, "this shows that you can be old-fashioned and still make your fortune."

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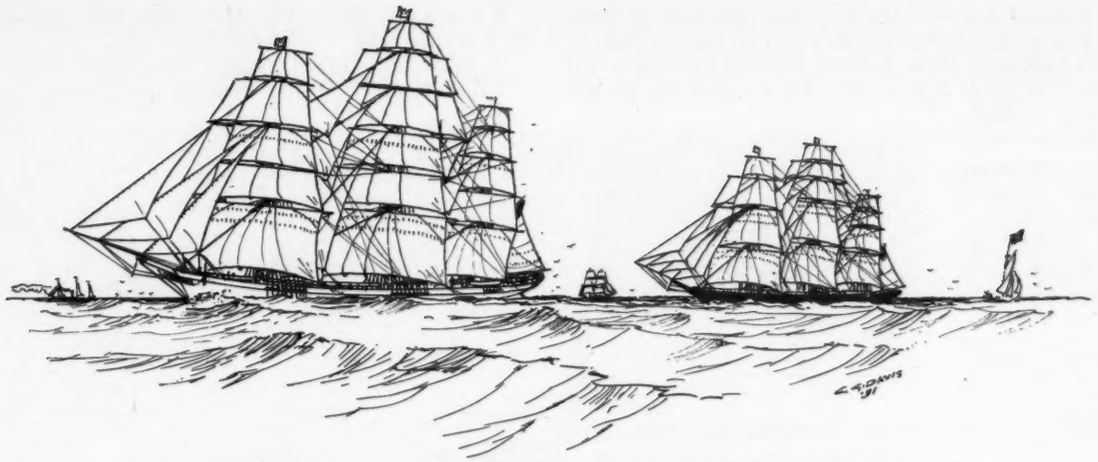
Captain Haulaway took up the jib again and sighed. "But," said I, "did Claire Smith take kindly to her good fortune? Didn't she say you had prosti" — I stumbled over the word myself — "her Art?"

"Nope," said the captain, "Humans are funny. She took a good look up at the sail, and a look at the check, and said, "What a little fool I have been clinging to the outmoded school. What I did last summer was cheap colored photography. This, at last, is Art."



Racing up the Channel on the last lap of the 99-day race from China. "Taeping" and "Ariel"

Making Clipper Ship History

How "Taeping" Won A Three Months' Race From "Ariel" By Twenty Minutes

By WALTER W. SLOCUM

A SCORE of ships lay in the River Min, off Foochow, loading for the great race 'round half the earth to London town with tea. They were crack clippers all, the pride of their day, busily engaged in loading for the homeward run by way of the African cape. Glowing flares illuminated the vessels, revealing swaying lines of coolies winding in endless lanes to their decks with chests of tea, human conveyors of a precious cargo that spelled wealth to British merchants and added bounty to the first ship to open hatches at the London docks.

It was generally believed that the first ship to finish loading was the fastest, and hence the favorite. At 5.00 P.M. on the 28th of May, 1866, Captain Keay of the trim clipper *Ariel*, roared a last curse at the departing Chinese lighters and ordered the Blue Peter to the masthead. It rose smartly, and, breaking neatly from its knots at the truck, whipped out with the breeze while the crew flung three hearty cheers at their less fortunate rivals. Captain Keay smiled grimly through his whiskers, and well he might. He had rounded the first mark of the race at the head of the fleet. The tug *Island Queen* took a line from *Ariel* and dropped her down stream to an anchorage well below the fleet, hard by Pagoda Rock, while the Captain went ashore in the gig for a wee nip by way of celebration.

The rattan half doors at Singapore Pete's had swung inward to many a hard-fisted blow, but Keay entered so forcefully that he dragged one of them in his wake, like a sudden squall blowing out a weather-worn sail. Through the mixed oriental crowd he made his way towards a group of rival captains at the bar, flinging those in his course aside as determinedly as he carried sail. The little circle opened to admit the envied skipper, while Singapore Pete filled glasses all around.

"M'Kinnon," said Keay quietly, singling out the skipper of the racer *Taeping*, "A'll bet ma bunnet agin that yin o' yours that A'll be on the welcomin' commitee that'll greet ye tae Lunnon."

M'Kinnon poured himself a stiff one, raised his glass to the light of the lantern over the bar, and with all eyes on him, slowly swallowed the contents. It was considered poor sportsmanship to refuse to wager the customary beaver hat on the outcome of the race. Then the Scot spoke: "Dinna let naethin' gae wrang wi that bunnet o' yours afore Lunnon's abeam."

The first faint streaks of dawn found Keay on the quarter deck and the crew on the fo'c's'le head bringing the anchor on the bow. The *Island Queen* made fast alongside as the pawls ceased to rattle on the windlass. Off Sharp Rock the Chinese river pilot was sent ashore and the tug steamed to a line out ahead. No sooner had the line raised, dripping, from the water, than the tug sheered about in the swift running tide of the turbulent Min River. *Ariel* swung about and Captain Keay, maligning the tug, the tide and the helmsman, ordered the anchor let go. Another attempt was made with the tug's boilers forced to the limit, but the tide was now dead low and Keay was forced to anchor. Another of the fleet, the lighter draft *Fiery Cross*, swept seaward.

Ariel lay at anchor all night, with the weather too thick to proceed. But Keay availed himself of this opportunity to trim ship, his vessel being down some five inches by the head. Hawsers, cables, provisions and cargo were moved into every available space at the stern. Keay had his bed moved to the door and tea piled tight in his room.

At 9:00 A.M., on May 30th, *Ariel* again got underway, crossing the bar, with *Taeping* and *Serica* on her heels. Beyond the Outer Knoll all three ships hove to, dropped their pilots, and stood out to sea on as nearly even a start as could be made. Ahead, the *Fiery Cross* had a 14-hour lead; behind, the rest of the fleet would soon be on their heels. But it was a race between *Ariel* and *Taeping*. Main skysails, fore topmast and lower stunsails were set, and the vessels stood away through the dusk for Turnabout Island.

Both captains followed the usual route to Anjer, in the Straits Settlements, on the passageway between

Sumatra and Java. Down they drove through the China Seas and Formosa Channel, the two ships *Ariel* and *Taeping* being in sight all day on June 2nd, three days out. The next day Captain Keay's bearings on the Paracels placed him eight miles from the North Shoals, with *Taeping* out of sight astern. The rival skippers played the fickle land and sea breezes of the June monsoon all the way down the Cochin China coast, then crossed to Borneo and exercised their strategy with the winds.

On the afternoon of June 9th Keay was roused from below by a shout on deck. To leeward was *Taeping*, closing in on *Ariel* until, at 5:00 P.M., the two ships were but three miles apart. Keay and M'Kinnon exchanged signals, wishing each other a close race. By morning *Ariel* had weathered a mile on her rival, and later in the day the two ships parted company on opposite tacks. Keay held on through the Api Passage and Gaspar Strait to Sunda Strait and Anjer, *Ariel* passing Anjer at 7:00 A.M. and *Taeping* shortly after noon of June 20th, both three weeks out. Ahead of them stretched an unbroken path across the Indian Ocean to the Cape of Good Hope. Here the best time could be made, and Keay and M'Kinnon hung out everything but their shirts. Ringtails, watersails, stunsails and Jamie Greens were set in addition to all sail, from skysails down. Spare jibs were set flying and spare staysails spread outside the lower stunsails. Both vessels met with moderately strong winds, the carpenters being kept busy repairing and fishing the lighter yards.

As the days passed the ships were made ready in anticipation of the coming struggle at the Cape. All lines were overhauled, gear repaired, canvas mended, and blocks and tackles greased alow and aloft.

Around the vicinity of the Cape, where breezes blow strong and ships show their paces, *Ariel* drew in with several of the Australian fliers. The sun came up out of a gray dawn on the morning of July 10th, bringing with it an increasing wind that drove *Ariel* down until the tip of her main yard was drenched in the driven crests of the gray-lipped seas. Captain Keay kept in the lee of the house and trained his glasses on a dark shape ahead. The spars creaked, rigging hummed. Below, the crash of the seas reverberated in the soundbox of the hull, but there was no thought of easing sail. A great race was in the running and the honors went to the skipper who held on to his sail the longest. It was not a thing of mere wood and canvas that split the seas and left a wake of troubled waters trailing far astern. It was a living, fighting ship, now closing up on the full figure of a homeward-bounder. Going two feet to her one, *Ariel* passed the *City of Bombay* close aboard and to windward. The heel of *Ariel* brought her sloping decks to the full view of those aboard the slower vessel, revealing the watch clustered to windward under the rail, and Captain Keay, with hands on the mizzen rigging and eyes aloft, feeling the heart beats of his racer. There was never a let-up in the thousands of miles of ocean track. It was drive, drive, drive her for the finish line, six thousand miles away!

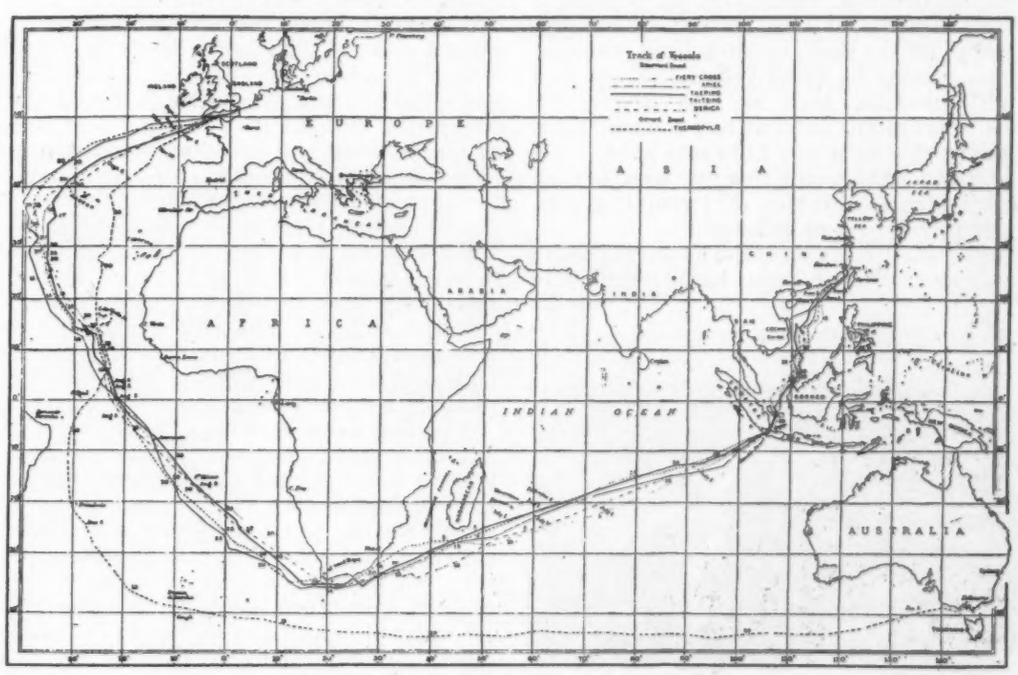
On July 15th *Ariel* drew up with and passed the flyer *Tantalon Castle*, this time with the brilliant sunshine sparkling on her radiant canvas set to skysails, and glinting in the silver spray that hurled upward over her bow and streamed back in rivers from her whiskers and figurehead as her bow rose high. About midnight *Ariel* drove over the Cape Meridian, with *Taeping* on her heels the following morning, and a bit nearer in to the coast. On July 19th the two vessels were abeam, but just out of sight. *Taeping*, nearer the coast, was a bit more fortunate in getting the wind, and on the run to St. Helena picked up two days on her rival. At Ascension, M'Kinnon's lead had dropped to one day. Both racers crossed the line on the same day, and both sighted and dropped Flores astern within the same 24 hours.

It was the blackest hour of the night, just before dawn on September 5th. Captain Keay held the deck. Out of the fore-rigging came the cry of the watch: "Licht Ahoy!"

"Whaur Awa' ?" roared Keay, rousing himself from the exhaustion that threatened to overwhelm him.

"Broad on the port bow, Sirr," came back the answer, and Bishop's Light, off the English Coast, announced the nearness of the finish line. Where was *Taeping* now?

(*Continued on page 126*)



Track chart of the clippers in the tea race of 1866

Artful Dodges

Some "Wrinkles" for the Cruiser Which Mitigate the Burdens of Work and Add to the Ease of Handling

+ + +

By WARWICK M. TOMPKINS

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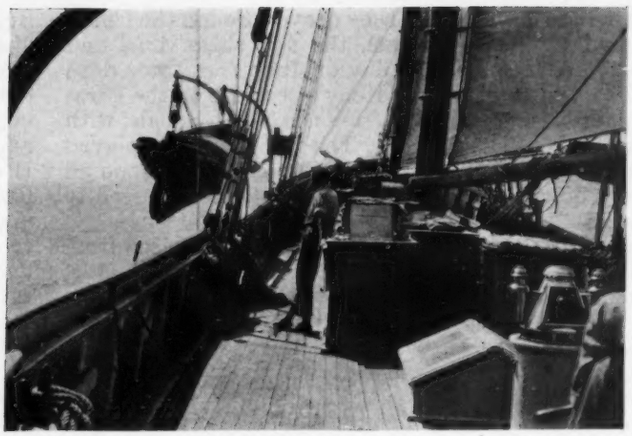


Deckhouse and after deck of "Wander Bird." Note the azimuth compass box atop of deckhouse

THE more experienced the sailor the more artful dodges he employs to mitigate the trials of weather and the burdens of work which are at times inevitable concomitants of sailing. There are tricks to all trades, but more in sailing than in most, because the sailor must be, usually, a composite seaman, navigator, rigger, sailmaker, plumber, chef, purchasing agent, carpenter, painter and half a hundred other things. The artful dodges of cruising men are legion and I want no one to think I am trying to present startlingly new or original ideas in this article. I shall doubtless mention many old favorites of every reader and overlook — through my own ignorance — countless schemes which deserve mention. My intention is to give cruising men, and those who wish to emulate them, some dodges of which I have first-hand knowledge.

ON DECK. Deck fittings for cruising boats are so well standardized, and possibilities vary so with the sizes and types of boats, that there is comparatively little room for trick developments in that region. One joy of cruising on *Wander Bird*, my present ship, is that all running rigging can be kept off the deck, hanging from pin rails, a method which cannot be employed unless one has bulwarks, high bulwarks, such as this 50-year-old schooner. Thus, what might seem at first a useful hint, is useless, as few yachts have any bulwarks at all.

Walking about one night, wondering just what aboard was worth mentioning in this sort of a rambling tale, I noted first our peculiar boom gallows.

A gallows frame is as nearly essential as anything can be on a cruising boat. No one who has ever tried to capture a lashing, vicious boom with crotch tackles of a dark night, or fiddled with those collapsible abominations, a boom crotch, will even debate the point. We wanted a very strong gallows and one which would not be demolished in the event of a standing jibe — they happen to the best of sailors at times — with a boom which had sagged an inch or so too low. The result of some thought is an iron gallows, on *Wander Bird* a rather massive bit of construction, with rounded corners and the usual three notches to take the boom. On a typical boat of today a similar gallows would go through the deck and through opposite ends of the same deck beam, being held in place, as ours is, by heavy nuts screwed up hard on the threaded ends of the pipe.

The result is a gallows which is indestructible, is generally agreed to be more sightly than wooden ones, and which makes an excellent place from which to stretch awnings or lifelines.

A most seamanly trick which I learned from *Niña*, Paul Hammond's ocean racer, is fitting the rudder post so that a tiller can be shipped in case anything goes wrong with the wheel steering gear. Now there are ways and ways of doing this. *Niña's* post-head was brass-capped and the tiller had a heavy, square-shaped brass strap (if memory serves aright) which slipped over the post-head and assured control at once in the event of an emergency. *Wander Bird's* rudder post being concealed under a housing, and the ship demanding greater strength in her members than did *Niña*, made it possible for us to use an extremely strong, but comparatively unsightly rig, which any blacksmith can easily make. We took a band of heavy iron, eight inches wide, bent it into an inverted square "U," with flanges at both ends, and bolted this to an iron plate, in turn, strongly secured to the rudder post. The ship's original tiller, its butt iron-shod to prevent wear, slips into this square receptacle and is at once effective when the wheel-box and wheel have been removed.

Washing down is always something of a problem on any boat and as boats get larger the usual custom of hauling water aboard with a bucket becomes more and more unsatisfactory. This year *Wander Bird* got, for about $35.00, a Gould pump, iron with brass-lined cylinders and brass pistons, which has been a constant joy. We have been able to keep the ship infinitely cleaner, with much less work. Anchors and their chain are cleaned before any muck gets through the hawse-pipes. The dust and dirt of cities disappears from the sides under the lash of a stream twice as powerful as any

The boom gallows as fitted on "Wander Bird"

delivered by such power-driven pumps as the ordinary cruiser could hope to run. Our rig-up is simplicity itself — a 20-foot length of rubber hose for an intake and 50 feet of smaller tubing which we drag around on deck, blasting dirt through the scuppers. One "husky" can man the pump; two hands make the job child's play.

Few yachts have bilge pumps worthy the name. Why not combine in such an installation a fool-proof, inexpensive deck pump and a splendid bilge pump?

As far as I know the little "dog-house" which "Bob" Bavier designed for *Memory* in the 1924 Bermuda Race was the forerunner of the almost invariable deckhouse one now sees on small cruisers. Fred Ames had one installed on *Primrose IV* in 1927, for the homeward Atlantic passage. That house, just a raised hatch with ports and a folding seat for one's watch partner when he was not needed on deck, was a great blessing on the northern voyage. Built on the boat as an afterthought, I think that house was beyond criticism; but if one were building a ship I would urge a bigger deckhouse with a bunk in it, with flag lockers and shelves for flares, Very pistol, signal books, light lists and other things that are often wanted quickly. Our own deckhouse, with two bunks, one on each side of the companionway, is suitable for a ship the size of *Wander Bird* and is extremely satisfactory. Perhaps no single superficial feature of the ship calls forth more favorable comment.

The sole remaining wrinkle on deck which now occurs to me is the installation of deck glasses, those heavy triangular prisms which, set flush in the deck, give such astounding quantities of light below. They are as old as the hills, but they remain unequaled for their job. In using them, be sure that they are carefully bedded in and well surrounded with marine glue; otherwise you may expect leaks.

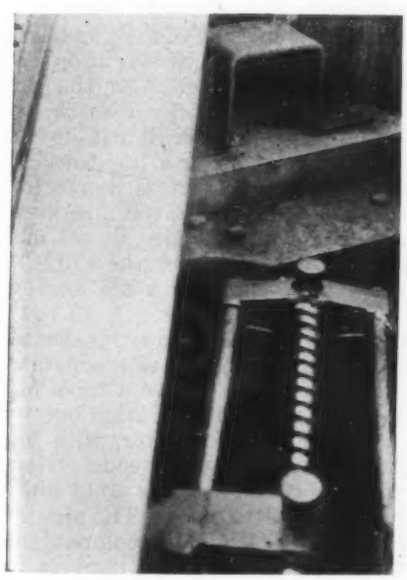
RIGGING. *Wander Bird* carries a square yard, the rigging of which I have attempted to show in the accompanying drawing. The yard is rigged almost exactly like that of a ship's topgallant yard and I have no fault to find with it. Wise opinion about squaresails varies from that of Conor O'Brien, who will have nothing else, to that of Sam Wetherill, who sulphurously damns all squaresails and their appurtenances. I side wholly with neither expert. In my own case, I would not rig my squaresail, with its attendant clewlines, buntlines, reefing tackles and sheets, except in preparation for a long run, say 2000 miles, with assured fair winds. Nor would I attempt a passage through the Trades without a squaresail. I also want raffees, but, never having had them, I shall not go into a discussion of them here.

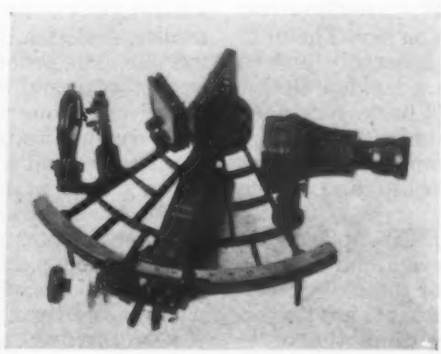
Primrose IV had a square yard which set on a wire jackstay. That one, not by any means perfect, and ours, which I rate very successful, are the only two square rigs I have actually worked. If a conclusion can be drawn from such limited experience, and from what I have read of other rigs, I would say that the permanence of the square rig will largely determine one's liking for it.

A yard rigged to stay aloft in all weathers must be planned so that there will be no chafe. It must be strong, rigidly secured. *Primrose's* rig chafed and banged about badly. *Jolie Brise's* chafed to an incredible extent. Loomis didn't like *Pinta's* rig, for reasons he has made very plain. So, if you want comfort running, rather than all possible speed, rig your yard for permanency. If you want speed, take a couple of spinnakers, sleep uneasily o' nights, and see if you can keep your poles from dipping into the rollers, or cockbilling.

Wander Bird's yard is of Norwegian spruce, seven inches in diameter at the slings, and three and one half inches at the ends. It has regular foot ropes and the sail is bent to it, men laying aloft to shake it out or furl it. This, contrary to popular opinion, is really a simple and easy job. There is a stout chain at the middle of the yard, suspended from the topmast step, holding most of the weight. Plowshare steel wire rope lifts, passing through tested, galvanized blocks at the lower masthead, and thence to hemp lanyards and ringbolts in the deck, support the ends of the yard, regulate the horizontal trim and carry the balance of the load. The wooden yoke, bolted to the after side of the yard, is wide enough so that the yard is carried well forward of the mast, permitting it to be braced around to a quartering breeze. If the wind is more abeam than the quarter, I think the regular working lowers of a schooner become more effective than a sharply braced squaresail. Braces, with whips, go to each quarter. This rig is always ready for use. It is clear of the deck. It obviates the sometimes risky job of handling a 36-foot spar in a seaway.

No feature of *Wander Bird's* rigging causes more comment than the parrals and wires which have been used on foresail and mainsail instead of the traditional mast hoops. There is an important interrelation between





Left. View of rudder post, showing iron fitting to take tiller

Above. A micrometer-screw sextant

Right. "Primrose's" chart table is atop the motor housing

the size of the parrals and the size of the wire to be used: the wire should be as large as can be got through the mast beads (the eye splices in both ends of the wire must be well made), for small wire will eventually saw through even the hardest beads. I imagine that hemp might prove as satisfactory as wire, though it would not last as long.

The advantages of mast beads and wire are obvious. The beads run with very little friction, and they do not scar the masts as hoops do. Each wire, made fast to the sail by a small shackle, can be demounted in a trice, and the old nuisance of hoops marlined to the sail, with the marline wearing out, its ends getting adrift, etc., is gone forever. Untold hard work is eliminated. Sails are not only bent and unbent with great speed, but they are set and taken in as easily, or more easily, than Bermuda sails on tracks. Any one wishing a demonstration of this can come aboard *Wander Bird* and watch two men of average strength set an 1800-square-foot mainsail and note for themselves how the halliards have to be checked when the sail is lowered so that it doesn't come down by the run.

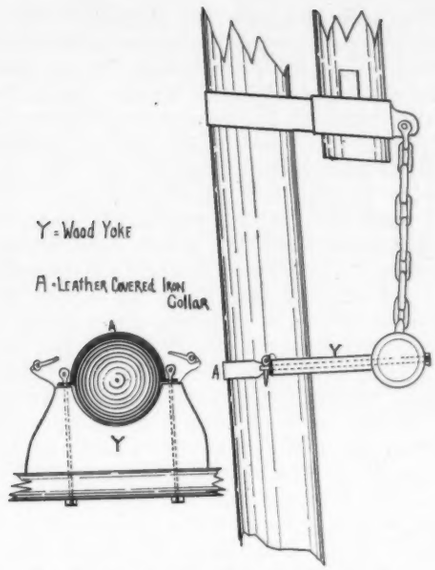
Chafe is the sailor's arch enemy, but an enemy which can be overcome by proper rigging. If your leads are clear, you will have none — except on the headstays, where the jib pendants rub when you tack. Thus, every man can be his own doctor, changing his blocks aloft if necessary, leading his halliard through brass thimbles seized to the rigging, using pin-rails and bitts at the sides of the ship, instead of at the mast foot, and in similar obvious ways correcting whatever faults the ship may have.

A wrinkle we have found exceptionally helpful aloft, where there are a multiplicity of blocks hanging more or less in the same fore-and-aft plane, involved the use of varying lengths of chain between the masts and the offending blocks. It will be seen that by this dodge the various blocks will be at different distances from the mast and clear of halliard parts when the sail (gaff-headed rig) is set, and that the halliards can thus be made to lead entirely clear.

The jib sheets! Wire? Hemp? Chain? What to use along that fathom or two of pendant where the headstays continually chafe? Following Commander Martin's ideas, we have used both hemp and manila. Both last very indifferently well. No one wants to be changing jib pendants every week or ten days. On a fair day you notice a tiny bit of chafe forward. "We'll replace that pendant again when we get in port," you say. The next evening a gust of wind comes up unexpectedly just as the ship gets quieted down. There is a sudden clatter in the runway as a taut sheet springs back. A vicious slatting forward tells you the jib is adrift. If you're lucky, it simply means a wetting as you get in the sail. Frequently, it means a sail slatted to bits and a long job of sewing for the next day.

Wire is an utter abomination. In the first place, you have to serve the splices at both the sail end and the sheet end of the pendant. Every two or three days this serving is chafed through and Irish pennants are fluttering forward. In a surprisingly short time the outer strands of wire themselves wear through; then you are in for a merry time. The wire catches with devilish cunning every time you tack. Of a dark night you grab a pendant and spear yourself in a dozen places.

I'm going to take a tip from the fishermen, from explorers, from pilots. I'm going to use strong, short-linked chain. "It'll brain you some dark night!" say the yachtsmen I've talked to. In answer I shall say that we have chafed through half a dozen jib pendants in the last fifteen months, while our original jib sheets, carried for 15,000 miles, lying in the waterways, alternately wet and dry, have shown no signs of going. Hence there is little danger of getting brained by flying chain pendants, for with strong sheets nothing will get adrift. And *should* a jib sheet carry away, we could be very sure, thanks to jib down-hauls, that the sail was down before anyone went forward at all. Chain is the thing, I'm convinced. On our recent trip to Labrador we thought we had found a way to protect manila pendants effectively by serving them with long ribbons cut from inner tubes, but the rubber wore through quickly and left the rope exposed. You can't put chafing gear on the stays, for then the headsails won't go up and down. Rawhide strips worked into the pendants offer some protection — if one doesn't want to use chain — but it is difficult to keep the rawhide tight and shipshape.



Details of "Wander Bird's" square yard

Wherever a sail touches a stay or a topping lift, the wise cruising man puts a muff of bagy wrinkle or chafing gear. A half-dozen puffs of this commodity along the aftermost shrouds, both fore and main, of a schooner are essential if a long run is to be made. Otherwise, the stitching of the sails will chafe through, with disastrous results. A sketch illustrates the method of making bagy wrinkle. The procedure is simplicity itself and affords a way of using old rope ends to advantage. Also, the job is a pleasant one with which to while away a watch.

In concluding these hints about chafe, it will do no harm to remind the tyro that wherever a line touches another line, or a spar or shroud, there is danger of chafe. Anchor warps should always be given a serving of canvas or sacking. When towing a tender, do not fail to serve the painter where it leads over the taffrail. And by all means, serve most carefully a sea anchor warp before turning in during a gale.

NAVIGATIONAL HINTS. It seems odd that anyone should build a boat and overlook the necessity of a separate chart table, yet very few small boats have a table for this use. The boat does not need to be a large one to afford a good table sacred to the navigator, with his special books, and the materials that he needs. *Primrose's* table, as shown in the photograph, is amidships, atop the motor housing, as a matter of fact. The picture (taken looking aft) shows the perpendicular companionway and a window we put in the bulkhead between it

and the table. There was glass in this to keep water and oilskin drip from the charts. Though the table was not big enough for even the smallest charts unless they were folded, it was extremely convenient and satisfactory. The snapshot shows a candle lamp, in gimbals, which we used regularly and which gave a surprising amount of light.

Wander Bird's navigational equipment approaches that of a steamer. There are few charts which can't be spread out flat on the table. In the wide, shallow drawers beneath the desk top charts of half the world can be carried. The upper, deeper drawers hold the sextants, stop watches (every ship should have at least a couple of them), binoculars, drawing instruments and all the other devices which make plotting the course so much fun. Immediately at hand is a purely navigational bookshelf.

No experienced navigator having seen one of Plath's (Hamburg) micrometer screw sextants will ever want to use the old type again. These superb instruments — with enormous and beautiful mirrors, neutral-toned shades and splendid telescopes — were developed during the war to aid submarine commanders to take quick shots at the sun and stars. The old-fashioned set-screw and the tangent screw have been eliminated in favor of a spring clamp, which sets firmly upon being released, and an endless tangent screw actuated by a wheel. Even the spring clamp need not be touched in taking a sight as it can be operated by the same hand that is turning the wheel, a pull down on the tangent-screw wheel disengaging the clamp when so desired. The wheel carries the vernier, marked into minutes and half minutes, on which it is easy to interpolate to fifteen seconds if one feels such accuracy is worth anything on a small vessel. The gear teeth with which this endless screw meshes are cut with wonderful precision. It is essential, you see, that if the vernier reads, say, 31 minutes 40 seconds, the instrument will always come to rest reading some degree and 31 minutes and 40 seconds. This it does, though how the effect is achieved I cannot explain. With such a setting of the vernier you cannot get any other reading, the index arrow jumping ahead or back when the clamp is released until it settles in its proper groove.

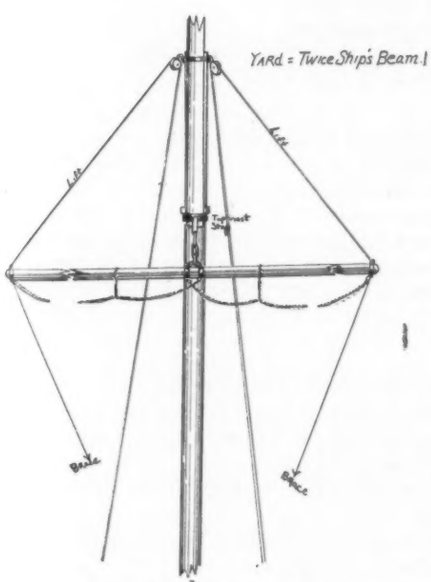
We carry three watches because I distrust radio — it invariably gets out of whack when needed most! And three good watches, checked against one another, are safer than a single chronometer which would cost as much as a trio of the smaller instruments. Three chronometers, if you have the cash and the space for them, are ideal, of course.

In buying compasses we got two underlit instruments which have been very satisfactory. The steering compass is a seven-inch card marked solely in points and quarter points. The azimuth compass, put atop the deckhouse so as to clear the rail, is marked in degrees on the outside and points on the inner ring. It is possible to steer more easily and accurately when the quarter points are next to the lubber line than when they are half- or three-quarters of an inch away. A sometimes dangerous error in parallax is thus avoided.

The inside of the binnacle should be black. I have experimented with both black and white and know that the former is much easier on the eyes than white. The compass should be low to be best seen. Our present binnacle is a few inches too high, just enough so that the lubber line catches the light in such a manner as to appear silvery instead of the dead black it should be, and I think, in general, that compasses are set too high to be read with the greatest ease. Compasses set under cockpit floors or seats do not seem to be very satisfactory. If the glass over them does not get broken it soon becomes badly scratched and is difficult to see through. And bearings cannot be taken with such installations.

CABINS, GALLEYS AND TOILETS. *Windjammer*, Commodore Crabbe's former schooner, designed by Mower, was the first yacht I ever saw almost entirely open below decks and she impressed me unforgettably with her airy spaciousness and great amount of room. And more and more, as I see yacht after yacht cut up into tiny, stuffy pigeon-holes of staterooms, do I wonder at owners and designers and their boats. In many ways we can profit by looking backward. I think that in the big, open cabins of the old pilot boats can be found the best model for a seagoing yacht. *Jolie Brise* showed me my first built-in bunks. I'll never forget how immaculate her

(*Continued on page 124*)



Forward side of square yard

How bagy wrinkle is made. Strands of old rope are twisted about a long loop of marline and drawn tight

How chafing gear is wrapped on stays

"And Fearsomely He Lied"

THERE can be no harm in spinning a yarn
When men are out to sea,
And I've heard some tales of ships and sails
As rank as rank can be,
But the tales that were told by one voyager bold,
(About six months off of a farm)
Would make the hair on a barber's chair
Stand up on end with alarm.

He dreams of the day when he'll hold sway
With his tales of deep sea lore
Where they sit and talk on the old board walk
In front of the general store.
He's borrowed, I fear, in his short career
From yarns older seamen have told,
And he's apt at applyin' when he starts in his lyin',
Himself to the hero's rôle.

He tells of a trip in an Arctic ship
Of Boston, the *Nelly Bly*,
Where they sighted one day up Newf'land way
An iceberg two thousand feet high!
Another he told how the captain bold
Got kilt in a jambouree.
From death's cold grip *he* saved the ship
By busting a mutinee.

Once on a time, down by the line,
He was calmed forty days all told.
The water was bad, all hands went mad;
And the ship incessantly rolled.
"I see," says he, "It was up to me
"To save the ship and crew,
"So I gets me an axe and away I hacks
"At the spanker's halliard and clew.

"Into the sea with the riggin' free
"The mast at last she fell;
"I'd a notion for perpetual motion —
"I'd use the bloomin' swell.
"As she drifted astern I took a turn
"And hauled her into the chock;
"Made the butt fast to the stump of the mast
"And hauled her taut with a block.
"With every swell that rose and fell
"(For the sea was never still)
"She sculled away day after day
"And finally reached Brazil."

As a girl's defender he killed a bartender
In a Bahia gin mill;
She brought a gendarme to the scene of the crime,
For she loved the barkeep still.
He got out of jail when a tropical gale
Blew the calaboose down;
He was sentenced to hang by a native gang
And he just did get out of town.

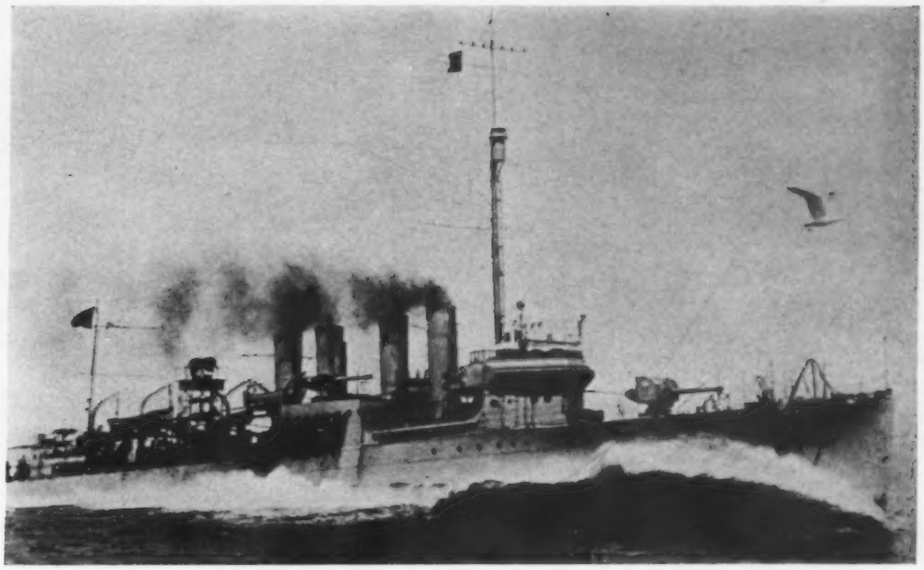
He had to walk where headhunters stalk
All the way overland to Peru;
A wild maniac with no clothes on his back
Showed up when that trip was through.
He dug out his fine in a saltpeter mine
Down in a Chilean port;
Made a trip as a sailor in a Limejuice whaler
Where he fought with the hunters for sport.

He'd been in a brawl in Montreal,
Cleaned out a bar with a stool;
Sang drinking songs with seamen throngs
In Lime Street, Liverpool;
Been in a jam in Rotterdam,
Where cops are brutal and big;
They broke up his fight in Schiedamschedijk
And he found himself in the brig.

With a girl he bought for next to naught
He lived in Timbuctoo;
Ran diamonds out of Delago Bay
With a savage pirate crew;
Cooked his own stew with a weekly boat crew;
Fought in the streets of Cork;
Then he joined a tramp with a fo'c'sle cramp
That landed him back in New York.

Now he means all right, this rising light,
I'll let him practice on me —
I'll give him a tip when he makes a slip
In the technical terms of the sea,
And when he gets home, tucked away in his dome
Will be tales of the sea galore;
No doubt he'll be king with the line that he'll sling
In front of the General Store.

TEXAS GLASS *and* FORD WILKINS



U.S.S. "Brooks," one of the destroyers recently decommissioned, making a full power run

A Dead Ship Yard

The Decommissioning of Naval Vessels Is a Gloomy Task for Officers and Men

By F. E. M. WHITING

Lieut. Com., U.S.N.

IN SEASON or out of season, a ship yard is instinct with vitality. In yacht yards the days of fitting out usher in a period of unceasing activity. Impending events cast their shadows before them, so that the atmosphere is one of preparation, of impatience. When the days of winter quiet come there is no sense of death, of extinction. Rather the atmosphere is one of quiescent waiting, of expectation — a biding of time until the days of activity shall again be resumed.

Early last April I had occasion to visit a yacht yard. There was every evidence that winter was over, but as yet winter housings had not been removed from the yachts. Here and there, an industrious owner was tinkering with cabin fittings, or examining his rigging, and I remember one who, with a source of satisfaction, stepped his yacht ensign — why, I never could understand, but I imagine he wished to be sure that it was still a good fit. Everything was alive, everybody industrious, busy.

Only once have I seen a ship yard that reminded me of a graveyard. The graves in it are pathetic — unwatched, and apparently with no loving hands to keep the grass cut and the headstones upright, so to speak. They seem to be simply withering away to a slow oblivion, a fate which none of these ships — no ship, in fact — ever deserves. To me a ship represents more than an individual. Alive, it is a highly organized, vital being composed of a hundred parts; dead, it is nothing.

It was my misfortune to take part in the "burial" of a ship destined for this particular graveyard, and the memory of that experience is a forbidding one still. It is difficult even to sketch in the details necessary to picture this procedure.

The Fourteenth Destroyer Squadron attached to the Scouting Fleet, and consisting of nineteen fine boats, left Newport, Rhode Island, for Charleston, South Carolina, on Monday, September 29th. For the remainder of the week the squadron maneuvered, attacking cruisers, steaming darkened, weathering a good blow, and conducting gun drills, as it always did when transferring from one base to another. On Thursday one division was detached to return to Boston.

The squadron itself was an extremely tightly knit organization. In the minds of the nineteen captains there were nineteen "best" boats; in the minds of the three division commanders there were three "best" divisions — and in each case it was his own. Our Squadron Commander was an old destroyer officer of great experience to whom we young skippers looked for sage advice. Altogether, our squadron was a happy one, care-free, and ready to defend itself against all comers. Every one of us looked ahead to a fine autumn, with plenty of target practice, maneuvering, and good, hard rocking chair fights afterwards on the golf course.

In order to communicate with its various units spread over wide expanses of ocean, the Navy Department broadcasts hourly, over the radio, orders and instructions to commanders at sea. If a number of ships are proceeding in company, as we were, it is not necessary for each individual ship to listen to the schedule. Those detailed to receive it will pass any messages to the ship concerned. However, practically every ship somehow or other finds time to get the news from the fountain source. Sometimes considerable advance and interesting information is thus obtained.

On Friday, October 3rd, at about 11.00 A.M., the squadron was headed for Charleston, having rounded Hatteras. The blow was practically over, the sea diminishing and various signal bridges were gossiping back and forth about the general state of life which, with port in sight on the morrow, was extremely good.

Nothing is as sad looking as a dead ship yard. Some of the destroyers out of commission

Imagine the consternation of the radio operator on each ship as he copied, in an unexcited fashion, the following message from Washington:

\+ + +

0003 fourteen repeat fourteen destroyers of Squadron 14 will be placed out of commission at Navy Yard Philadelphia as soon as practicable period request your recommendation names of vessels be placed out of commission by despatch period details of reorganization by mail 0010

\+ + +

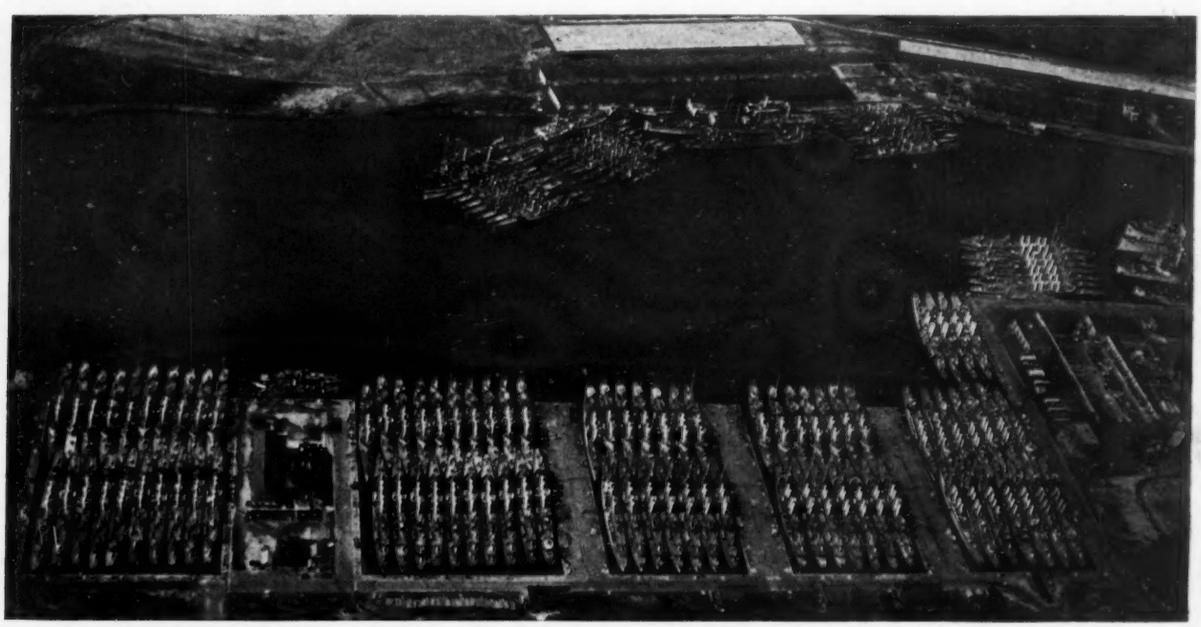
On our ship, before the messenger on watch on the bridge could obtain the despatch for delivery to the officer of the deck, the radio operator simply could not resist calling that personage on the voice tube to announce in a very excited voice, "The Fourteenth Squadron is going out of commission!" Before the messenger reached the ladder leading to the bridge, the men on deck outside the radio room, which is one of the sheltered spots on the ship, knew the contents of the message. Before the officer of the deck had had a chance to read the message the news was spreading forward faster than a gasoline fire.

By the time the messenger reached me the news had been heard by half the ship's company. "Captain, the Fourteenth is going out!" announced that worthy bluejacket as he handed me a slip of paper.

"No," I said, "it doesn't say that; it says fourteen of the squadron will be decommissioned — perhaps we shall be one of the lucky ones to remain in." These words started more arguments than two political candidates electioneering for office ever thought of uttering. "We were!" "We weren't!" and so on, all day. Because of the fact that our boilers, condensers and other important auxiliaries were old, I felt inwardly that there was very little chance of our being one of the lucky five remaining in commission.

For the next week there was still hope, and the crew worked as though their lives depended upon it. They were on their toes continually — they worked like dogs. They hoped some little thing might keep the ship a part of the squadron; but the middle of October we received definite word to go out of commission.

(*Continued on page 121*)



Dove-tailed like sardines in a box are these decommissioned destroyers, laid up for an indefinite period

Photos by M. Rosenfeld

Start of a small one-design class of sea skiffs at the recent Miami regatta. The event was won by "Pan-Am"

In the Spotlight on Biscayne Bay

Keen Racing at Miami in Which Ray Pregenzer Takes Colonel Green Trophy

THE motor boat racing in Florida this winter was as keen as ever, and was crowned by the great achievement of Gar Wood in his latest *Miss America*, number nine of the name.

In the annual Biscayne Bay regatta, held at Miami Beach on March 17th and 18th, Ray Pregenzer's performance with his 4–60 powered *Century Hurricane* in winning the Colonel Green Trophy was outstanding. In the close competition for this coveted prize, Richard Neal, of Bay City, Mich., was only two points behind the National Class F professional champion. Pregenzer turned in a speed of 40:05 in the first heat, which he won. In the second heat the best he could do was to get a third place.

Miss Meadowmere II, Chris Ripp's national 151-cubic-inch champion, although hard pressed by Al Louvert's *Miss Daytona*, won in her class, turning in a speed of 44:13 m.p.h.

George Moore, of Gainsville, Fla., driving a Century boat, took first place in the new 125-cubic-inch class.

Start of the free-for-all runabouts (right). Won by "Baby Gar," at 42.58 m.p.h. "Madoshumi IV" was second.

Below, "Humpty Dumpty," driven by Miss Maude Hughes, winner, 225 h.p. runabout class

In the runabout races, under the new A. P. B. A. rules, *Musketeer II*, driven by A. H. Howell, turned in a speed of 34:43 m.p.h., to win in a fleet of eight boats in the 200 horsepower class. This Hackercraft is powered with a Sterling Petrel.

Miss Maude Hughes, driving Jack Rutherford's *Humpty Dumpty*, a Chris-Craft, came to the fore again to take first place in the 225 horsepower class, with 35:24 m.p.h. her

Start of the outboards for the Col. Green Trophy. In two of the heats the drivers were over-anxious and "beat the gun," with the result that the whole class was recalled

best speed. In the fast 250 horsepower class, Jack Rutherford's *Why Not* was the winner, turning in 42:12 m.p.h. The displacement free-for-all was won by Peter Strasbader, of New York, in *Baby Gar* with 42:58 m.p.h. his best speed. *Madoshumi* was second. The same two boats ran first and second in the grand free-for-all the next day.

In the Express Cruiser Handicap, the scratch boat, G. D. Lynn's *Sea Gull*, took first place on both days, turning in her best speed of 29:32 m.p.h. the second day.

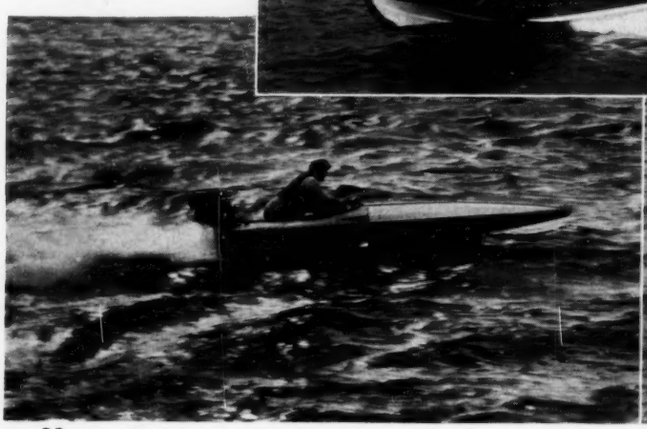
Twenty-three boats of every class and description entered the chance race and, when the figures were finally worked out, *Madoshumi IV*, owned by Herbert Mendelsohn, of Detroit, was returned the winner.

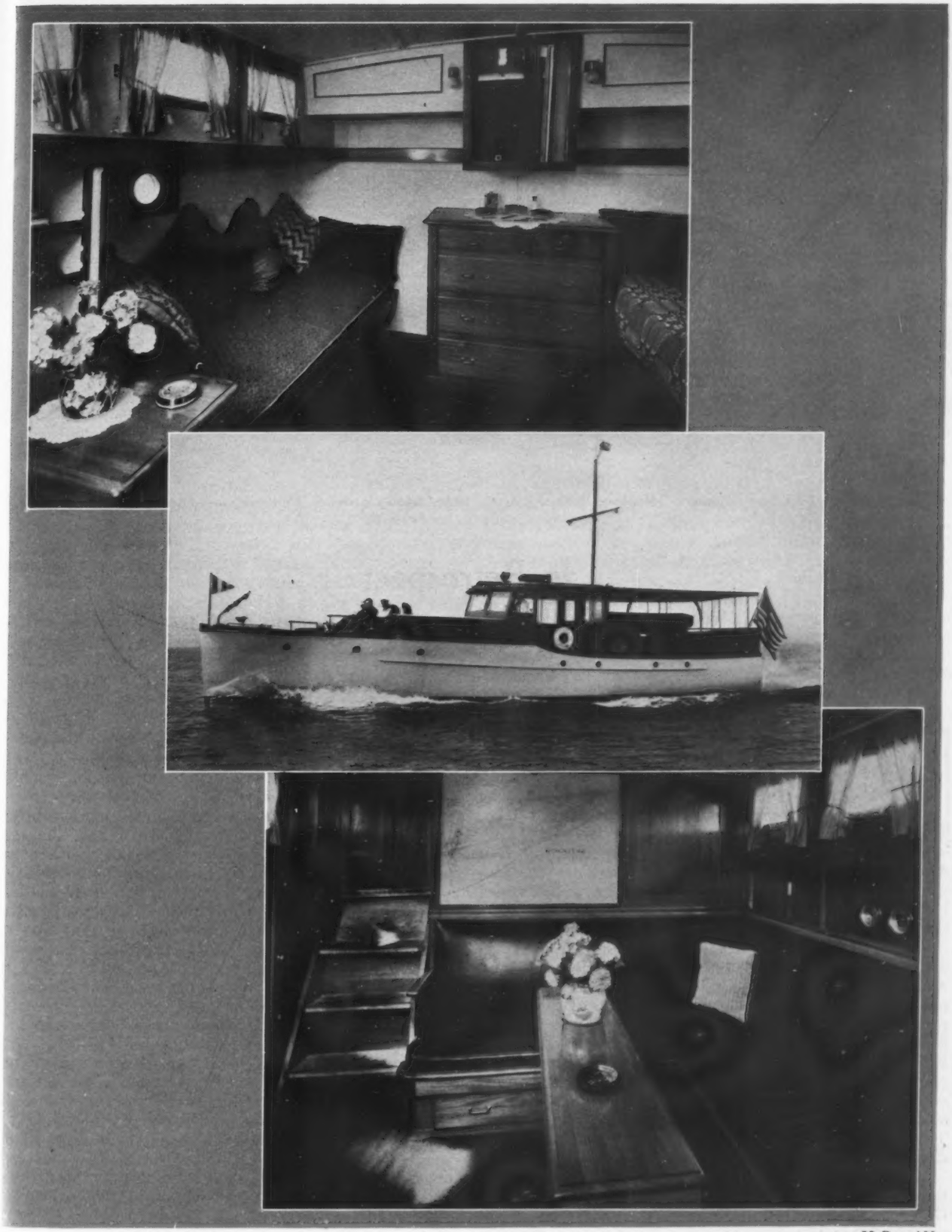
The outboard drivers put on a thrilling spectacle, as usual. Due to over-anxiousness in starting, several of the heats were called off the first day after numerous unsuccessful attempts to get them off to fair starts. On the second day, in the amateur races over a three-mile course, John Maypole took first place in Class F, with a speed of 32:16 m.p.h. Mulford Scull won both heats in Class C with his famous *Shooting Star*. His best speed was 36:21 m.p.h., while Earl Gresh, of St. Petersburg, took the honors in Class B, turning in a best speed of 35:10 m.p.h.

In the professional classes, over a four and one half mile course, Richard Neal swept both heats of Class C with his *Dixie*, driven at a speed of 39:05 m.p.h. And then, in the final race for Class F outboards, Pregenzer captured the Colonel Green Trophy.

Ray Pregenzer in his 4-60 powered "Century Hurricane" winning the coveted Col. Green Trophy at better than 40 m.p.h.

Left, a start in the new 125-cubic-inch hydroplane class, won by George Moore. Below, "Shooting Star," winner Class C outboard event



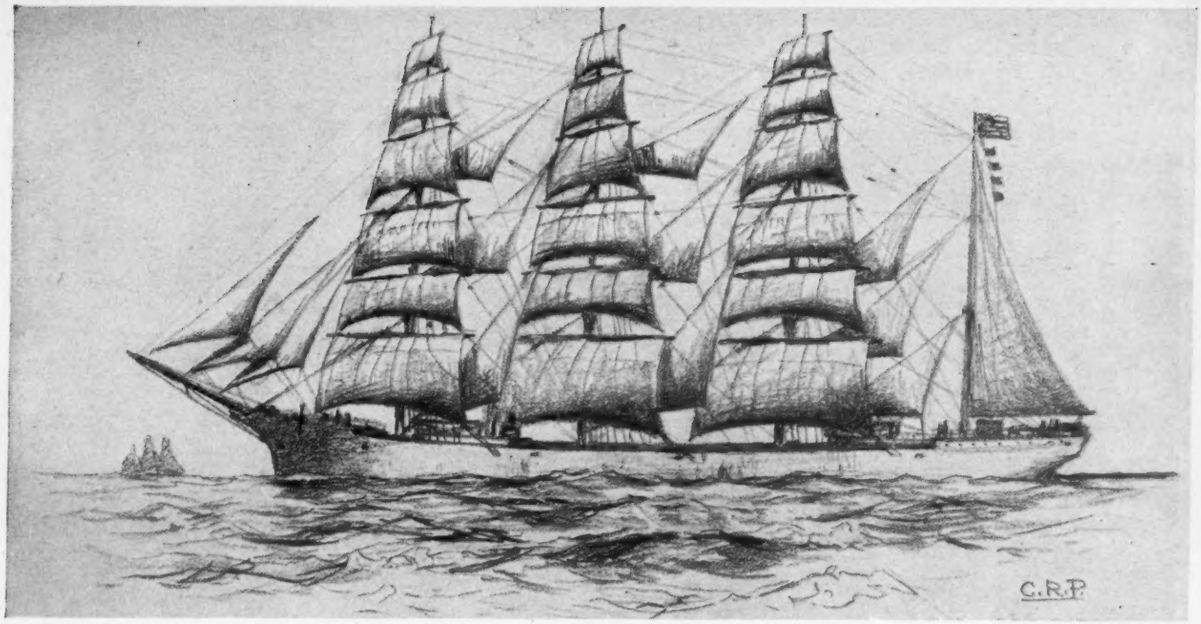


M. Rosenfeld

"Cygnus II"

A Handsome Power Cruiser, Owned by Clifford M. Swann, Larchmont Yacht Club

"Cygnus II" was designed by L. L. Kromholz and built last year for coastwise cruising. With attractive and comfortable accommodations, she has a good turn of speed, her power plant consisting of two Lathrop motors. She is 56 feet in length, and was built by Jakobson & Peterson, Inc., New York



"Hawaiian Isles," now the bark "Abraham Rydberg," as she looked when Charles R. Patterson, well-known marine painter, made a voyage in her forecastle

In Retrospect

Some Memories Called Up by the Recent Account of the Cape Horn Voyage of the "Abraham Rydberg"

By CHARLES R. PATTERSON

SOME time ago my friend, Edward S. Clark of San Francisco, sent me a set of snapshots he had taken of the departure from San Francisco of the bark *Abraham Rydberg*. Since then I have read with interest the well and ably written articles in YACHTING by Ben Ames, Jr. As the *Abraham Rydberg* was once the *Hawaiian Isles*, flying the Hawaiian flag, on which vessel I made a voyage, I cannot help contrasting things as they are today with those of thirty-odd years ago.

The *Hawaiian Isles*, when I first knew her, was one of the many four-masted barks of that period. Her hull was painted bronze green, deckhouses a dull brownish red, masts and spars painted mast color with a deep pinkish tinge. She carried three skysail yards. Though flying the Hawaiian flag, the vessel was owned in San Francisco, and when the Islands came under the American flag this vessel and several others came too. Like most American ships, she was manned by foreigners, the mate, a Down-Easter, being the only native-born American. The captain, first and second mates, were American citizens; there were no others in the ship's company.

As I look at Clark's photographs, and also those taken to illustrate Ben Ames' story, I cannot help but note how things have changed, and realize that the days of the nineties were the days of a totally different world. I often think it was a much pleasanter and happier one than the one we live in today. The pictures show the vessel's name painted on the bow large enough to be read a mile away, and also the manner in which sail was set, when leaving San Francisco — royals and topgallant sails being loosed before the topsails, and foresail and mainsail set before all the topsails were set. This would have caused a lot of comment in other years. Then, again, in one of the photographs, I look at three men, or boys, standing on the fore upper topsail yard, evidently posing for the camera. I don't believe this could have happened when I was at sea. The mate would probably have had to be revived with strong restoratives after seeing them up there in this position.

The *Abraham Rydberg* was accompanied to sea by a number of small craft; people undoubtedly realized they were witnessing an unusual occurrence and one not likely to be seen again in a hurry. But back in the years when sailing ships were there in force, no one bothered to see them off; in fact, few people, outside of the regular waterfront habitués, seemed to take any interest in them. It was not unusual to see several ships a day sail well up the harbor before shortening sail. One could walk for miles along the waterfront and see two or three big square-riggers at almost every wharf. The waters of San Francisco Bay were furrowed by numerous sailing craft, chiefly scow schooners, which carried freight to points on the bay, the upper bay and its environs. There were also a number of Chinese junks, some of them operated by shrimp fishermen, and gaily painted Italian and Greek fishing boats with colored lateen sails.

I joined the *Hawaiian Isles* at Newcastle, N. S. W., where she loaded coal for the Sugar Refinery at San Francisco. I left a small and rather ancient iron bark, the *Alexandra*, of London. This vessel was not the *Alexandra* abandoned near the Galapagos Islands some years later. On the *Alexandra* as well as on the *Kentmere*, my first ship, there was no power of any kind for hoisting anchor, etc., and it was rather novel to me to see the

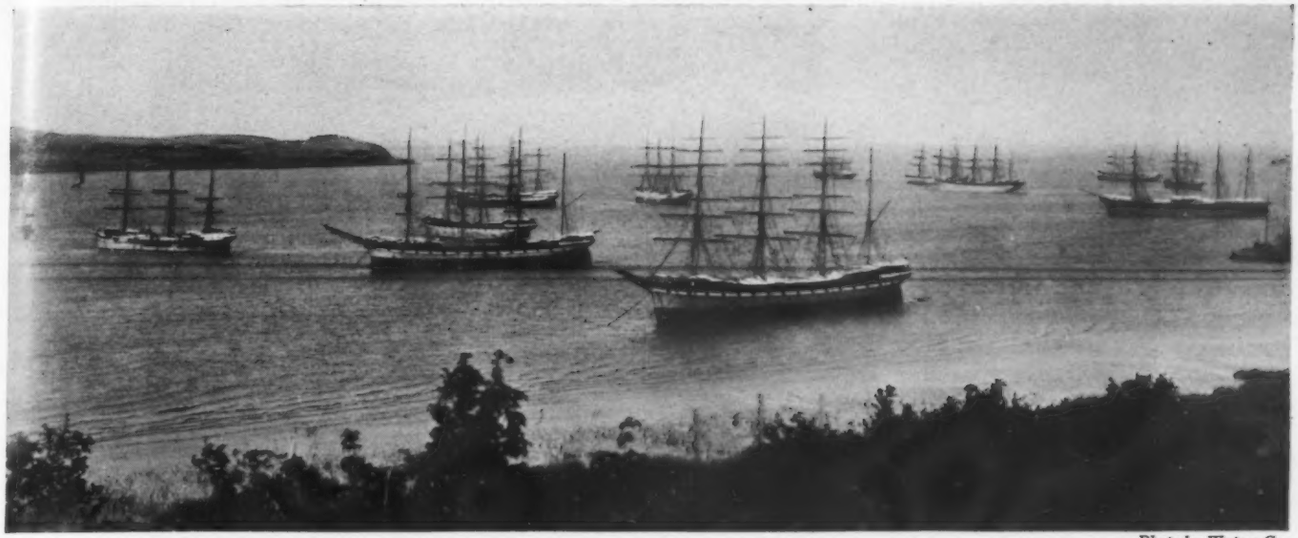


Photo by Waters Co.

The Port Costa shore, San Francisco Bay, forty years ago with the ships of the grain fleet waiting to go on the loading berths

anchor coming in on the *Hawaiian Isles* without using what was termed "Armstrong's patent." I well recall an occasion on the *Kentmere* when leaving Santa Rosalia, Lower California. The anchor had been down over three months, and when, after heaving for some time on the old-fashioned windlass, the chain was up-and-down, we could not break out the anchor. So the topsails were set and we sailed it out, spending another long session at the windlass ere the anchor appeared.

Captain Kustel, commanding the *Hawaiian Isles*, was a short, heavy-set Austrian, and though he looked like a farmer, was a good sailorman. He was accompanied by his young wife, who, if I remember rightly, was a San Francisco girl. I recall quite vividly one of the few occasions upon which he spoke to me. We were some twenty-odd degrees north of the Line, close-hauled on the port tack, with a strong and freshening breeze. About six bells in the first watch at night the three skysails were ordered clewed up and furled, and to my lot fell the mizzen skysail. Upon arriving on the yard I found the lee buntline had carried away, and the sail to leeward was flogging and thundering in the wind. After quite a battle I managed to get the bunt of the sail on the yard and pass the bunt gasket around it, then went out and made fast the weather side of the sail. I finally muzzled the lee side and made it fast, during which performance I could faintly hear Captain Kustel above the roar of the wind asking, "What the hell's the matter up there on the mizzen skysail yard?" I told him why,

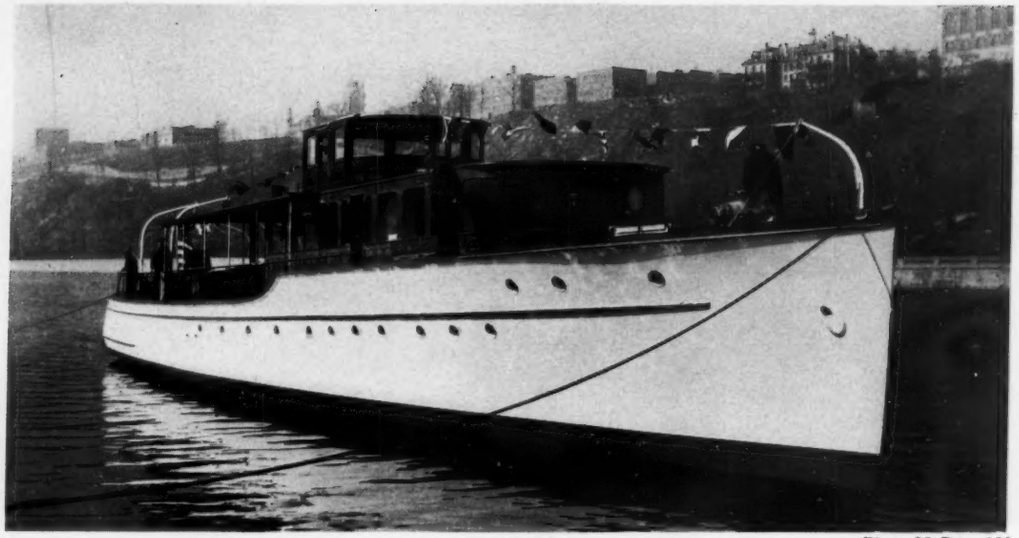
(Continued on page 118)

Photo by H. H. Morrison

The American ship "James Drummond" on which the author twice rounded Cape Horn

Copyright, E. S. Clark

The "Abraham Rydberg," ex-"Hawaiian Isles," making sail outside the Golden Gate on her last voyage



Photo, M. Rosenfeld

One of the first of the new yachts of the year to go overboard was "Vixen," owned by Adolph M. Dick, and launched April 3rd from the yard of her designer and builder, the Consolidated Shipbuilding Corp. On her trials she made 21.3 m.p.h. with three Speedway Diesels

The Month In Yachting

Transatlantic Race Fleet Growing Fast

WITH the start of the Transatlantic Race from Newport, R. I., to Plymouth, England, still over two months away, nine entries are assured and several other owners are making preparations to get their yachts in shape for the long passage of just under 3000 miles. The assurance of an entry from England, and the strong possibility of one from Germany, add much to the interest and give the race an international character.

The English starter will be the yawl *Ilex*, owned and sailed by officers of the Royal Engineers, a hard-sailing outfit who have had their yacht in most of the long distance races in British waters, and who drove her to victory once in the Fastnet Race and won the Plymouth-Santander Race last year. She has always been counted upon as being up with the leaders in every race in which she has taken part. She will be shipped to the United States and is scheduled to arrive here June 20th. The probable German entry is a husky 55-foot ketch, with 16 feet beam, owned and sailed by Captain L. Schlimbach, of Hamburg, formerly an officer in the Hamburg-American Line. He expects to sail from Hamburg May 10th.

Fotofeatures

The new electric auxiliary schooner "Mahdee II," owned by Commodore Alexander W. Moffat, and flagship of the Cruising Club of America, takes the water on Dorchester Bay

Fotofeatures

A starter in the Transatlantic Race. The new schooner "Seven Seas" being launched from the Lawley yard, Boston. She is owned by F. S. Dellenbaugh, Jr.

The full list of starters, as they are known up to the latter part of April, is as follows: —

Yacht	Rig	Length over all	Owner	Designer
Landfall	Ketch	71′	Paul Hammond	L. F. Herreshoff
Mistress	Schr.	60½′	G. E. Roosevelt	C. S. Hoyt
Highland Light	Cutter	61′ 8″	Dudley F. Wolfe	F. C. Paine
Dorade	Yawl	52′ 2″	Olin J. Stephens	Sparkman & Stephens
Water Gypsy	Schr.	59′	Wm. McMillan	J. G. Alden
Seven Seas	Schr.	46′	F. S. Dellenbaugh, Jr.	Boston Yacht Sales Co.
Amberjack II	Schr.	46′	P. D. Rust, Jr.	" " " "
Ilex	Yawl	50′	Royal Engineers Y. C.	C. E. Nicholson
Skäl	Cutter	48′	R. F. Lawrence	P. L. Rhodes

This is a very representative fleet of yachts and one that should make a fine race across the Atlantic. As to the probable winner, one person's guess is as good as another's at this stage of the proceedings. Several other American entries are strong probabilities before the closing date, June 10th.

E. Levick

The Six-Metre "Saleema," recently purchased by Edward Carpenter, of Santa Barbara, on her way to the West Coast

In addition to the Transatlantic Trophy for the winner, on corrected time, given by the Cruising Club of America and the Ocean Racing Club of Great Britain, and the other prizes already announced, Messrs. Paul Hammond and Donald Bush are presenting a trophy to be known as the Percy Chubb Prize, in memory of that ardent yachtsman and sportsman. As navigation plays an important part in the successful sailing of any ocean race, this prize is to be awarded, at the wish of the donors, to the amateur navigator of the winning yacht on corrected time, and according to the conditions of the race.

Race circulars and entry blanks may be had from the Secretary of the Cruising Club, E. H. Tucker, 135 William St., New York City.

Medal given by the New York Yacht Club to the members of the syndicate and afterguard of "Enterprise," successful defender of the America's Cup

Changes in the Class M Sloops

UP AT the Herreshoff yard in Bristol, R. I., they are at work on alterations in rig and hull of three of the Class M yachts that will prove of great interest to yachtsmen generally. In the light of the performance of *Enterprise* last year, with her duralumin mast and wide boom, *Valiant, Prestige* and *Avatar* are to have masts made of duro-aluminum and covered with canvas, impregnated with aeroplane wing "dope." They will be fitted with triangular booms with 'thwartship slides and have the new booms on single headsails, as well as mainsails. The interest that the new booms have created in yachting has been widespread, some having been built by the Herreshoff Company for shipment to Los Angeles, San Francisco, Chicago, and even to Cape Town, South Africa.

These Class M yachts are having their lead keels changed and centerboards installed, such as were used in *Enterprise*. *Istalena*, now owned by Chandler Hovey, will also be out this year, and as these changes will not be made in her, a very interesting comparison should be possible before the season is over.

The cup candidate *Weetamoe*, sailed last year by George Nichols, and now owned by Commodore F. H. Prince, of Boston, will soon be launched from the Herreshoff plant. She has been converted from a racing machine into a combination racing and cruising craft that fits the requirements of Class J, as internationally revised at the September conference last year. Where once there was nothing below but winches, running rigging, sail bins, and other racing gear, comfortable accommodations for cruising are now to be found.

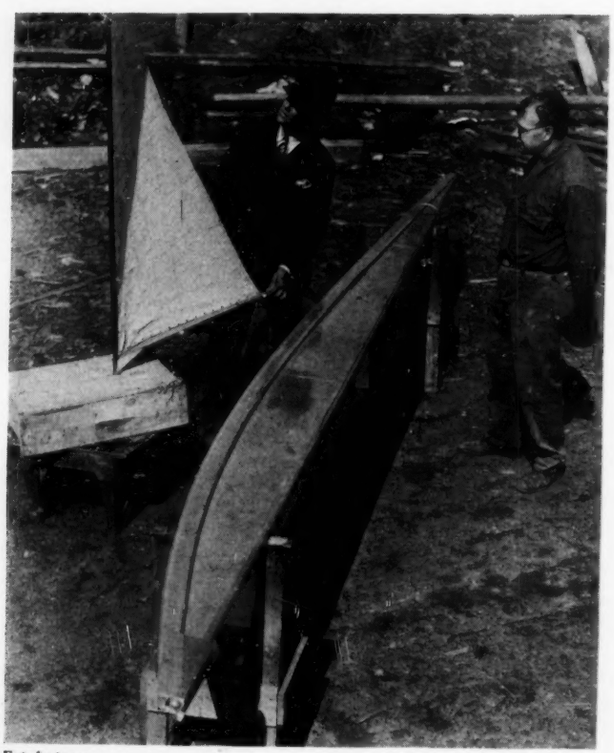
The Eight-Metre "Priscilla," American challenger for the Seawanhaka Cup, being lowered overboard on the new marine elevator, or lift, at the Nevins yard

The new breakwater and yacht harbor at Santa Barbara, on the Pacific Coast

Royal Nassau Sailing Club Winter Series

THE Royal Nassau Sailing Club sponsored, during the latter part of February, a series of races for the Pirate Class of 21-foot knockabouts. His Majesty, King George V, The Royal Yacht Squadron, and the New York Yacht Club donated the trophies.

The King's Gold Cup was taken by the Hon. Walter K. Moore, of Nassau, in a close contest. Vice-Commodore H. Winslow White, in three well-sailed races, captured the Royal Yacht Squadron Trophy. The last race, for the New York Yacht Club Cup, ended in a series of protests involving Paul Nicholson, Jr., and Miss Margaret Mallory. The protest was settled by a special match race in which Miss Mallory, handling *Captain Kidd* faultlessly, nosed out *Red Rover* by a matter of inches only, in one of the most exciting finishes ever seen in these waters.



Fotofeatures

The new swivel boom for racing yachts developed by the Pigeon brothers, Boston. The sail is fastened to a track on the curved side of the boom in order to give it more efficient arch at the foot

The little Pirate sloops, designed by Cox and Stevens and built in Nassau especially for the local racing, found ideal conditions for good racing in Nassau Harbor, with its almost perpetual trade wind, of varying strength.

Stars Placed on Schedule for Olympic Races

DEFINITE announcement has been made by the North American Y. R. U. that the Star Class is to be one of the four classes included on the schedule of the 1932 Olympics at Los Angeles. Each nation will be entitled to one entry, each entry to be provided by the competing country, though there will be no restriction as to where the yachts are built. They must, however, conform to the official plans and specifications of the International Star Class Y. R. A.

Thus, hundreds of yachtsmen who cannot afford to have an Eight- or Six-Metre designed and built for them, will have an opportunity to qualify for the Olympics in an inexpensive yacht. Furthermore, it extends this opportunity to many remote sections of the country, due to the wide organization of the class. Following is the tentative elimination system which the I. S. C. Y. R. A. Executive Committee has recommended for adoption.

Each fleet in the United States will hold preliminary races early in the year. The winners will meet in one of the regular Star District Championships, which will constitute the semi-finals. In the East this will be the Atlantic Coast Championship; on the Lakes, the Great Lakes Championship. Special events will be arranged on the Pacific Coast and on the Gulf Coast, the former to include Hawaii, and the latter, the Virgin Islands. The field will thus be narrowed to four candidates, one each from the East, West, South, and Great Lakes, who will meet at Santa Barbara about ten days before the Olympics, which will probably be sailed in early August. Arrangements are being made to cover the expenses of these candidates and the transportation of their yachts.

The Star Class wishes to make clear to all yachtsmen that they are welcome to join its ranks, as the aim of the Association is to secure the most able representative possible for the United States. All who may be interested in this project must realize that local eliminations must be held at a very early date in 1932. On the East Coast and on the Lakes there will be very little opportunity to tune up a boat before the races begin. A Star is not an easy boat to step into and sail to advantage the first time. Furthermore, there are many veteran skippers in the class. Those who may be considering Stars for 1932, with the Olympics in mind, would be well advised to order their boats this year, even if they must take a late summer delivery. This applies also to groups thinking of starting new Star Fleets. Fairly good deliveries can still be had from the established Star builders, who are not as busy this spring as usual. Complete information can be obtained by writing G. W. Elder, Pres., 51 East 42nd St., New York City, or plans and specifications obtained by sending $10. to J. F. Watkins, 47 Manhattan Ave., Bridgeport, Conn.

G. W. ELDER

New Boats for Class E on Lake St. Louis

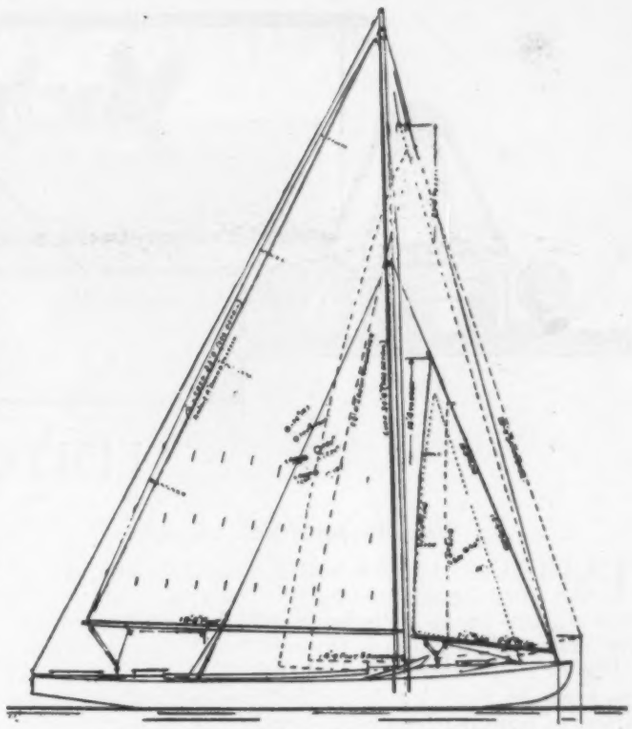
ONE of the most popular classes now used on Lake St. Louis, on which the Royal St. Lawrence and Pointe Claire Yacht Clubs are situated, is that known as the E Class. This should not be confused with the Inland Lake scow class of the same name.

These boats are small sloops of the typical shoal draft variety evolved from the yachts built to defend the Seawanhaka Cup under the old length and sail area rule of measurement. The original boats in the class were designed by F. P. Shearwood and built in 1901, and were centerboarders with a low gaff rig. A glance at the sail plan will show the main features of the design — a shallow, powerful hull, easily driven with a small sail plan. This design, coupled with a simple but strong construction, provided a boat that was inexpensive both in first cost and upkeep, and at the same time well suited for day sailing and racing on the shallow waters of Lake St. Louis. For cruising, these craft are reasonably comfortable when fitted with a small cabin or good-sized cockpit cover.

The original class was known as the three-rater, and the yachts were raced together for a number of years. After the war these boats sailed in a miscellaneous class with boats of other sizes and types, and it was not until 1925 that the present E Class came into being. The old miscellaneous class was split into three divisions according to rating under a formula somewhat similar to that of the International Rule, the limit of rating for the class being 17 feet.

In 1925 and 1926 five new boats were built, all with bilgeboards (one of the older boats, *Flounder*, has been so fitted with good results), of heavier and stronger construction, with a higher peaked gaff rig and increased freeboard, which added a great deal to the comfort of the boats. Two of the 1926 fleet had small cabins, and transom to permit use of an outboard motor. These boats proved very successful, racing gradually picked up, and old boats were rerigged and improved until, last summer, the class was numerically about the strongest on the lake.

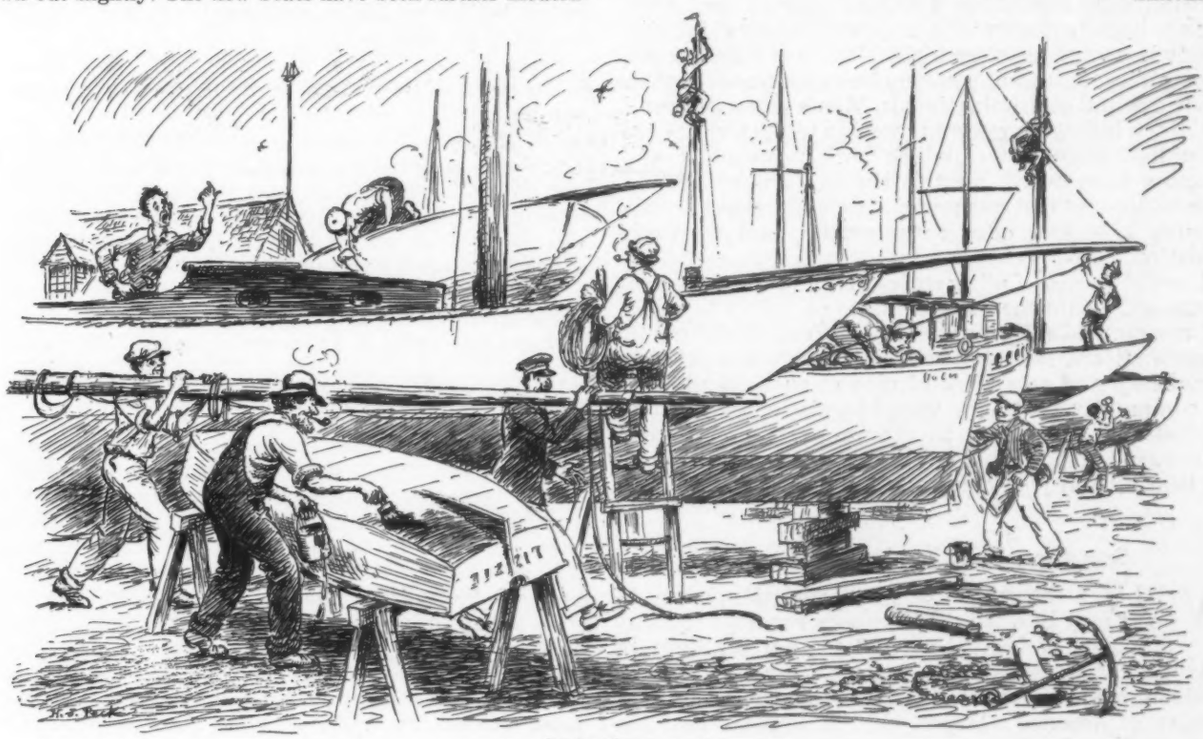
For the coming summer at least two new boats are now being built, both for veteran sailors, F. P. Shearwood and C. H. Routh, with prospects of one or two more. These boats will have hulls practically identical with those of the 1925 and 1926 craft, the hull lines being the same as those of the original three-raters, except that more freeboard has been added and the stern drawn out slightly. The new boats have been further modernized by the use of a Marconi rig and double rudders, so that the latest additions to the class will combine a hull that has proved itself in years of use, with an up-to-date sail plan, and improved construction and equipment.



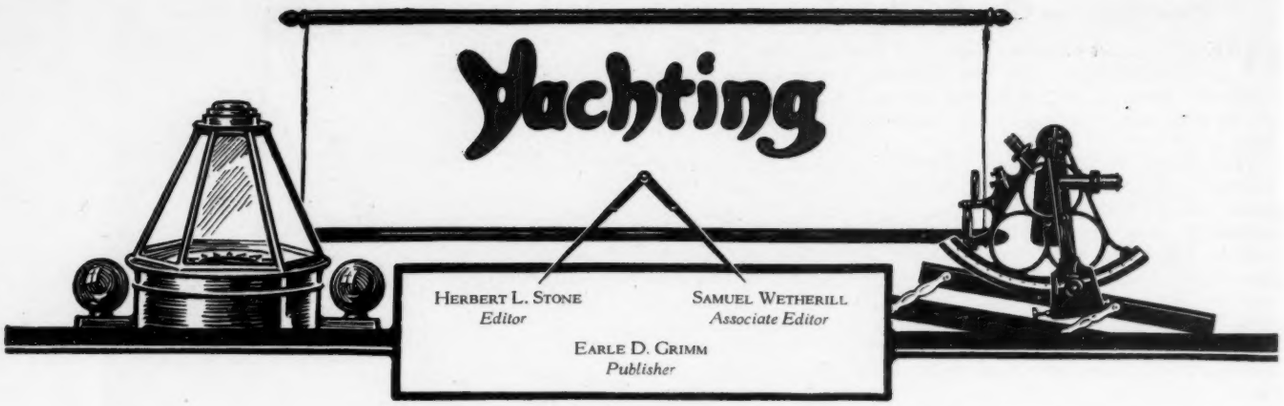
Class E sloop, Royal St. Lawrence Yacht Club

Under the revised rules for Class E the length on deck is limited to 27 feet, 6 inches, sail area to 306 square feet, height of sail plan to 33 feet, and strict scantling sizes and construction details must be used. Sails are limited to one suit per season, and light sails carried in any race are limited to two, overlapping jibs and other strictly racing gadgets being barred.

"BEAVER"



Spring fever



EDITORIAL

Watch Proposed State Legislation

IN THE United States, both the Federal Congress and the state legislatures have a habit of cluttering up the statute books with hasty and frequently unworkable laws, often jammed through in the interest of some class or individual and thus detrimental to the public as a whole. Such legislation is frequently aimed at the users of power-driven craft, very much as it was at the drivers of automobiles in the early days of the motor car. Just recently a crop of such bills have been introduced in various states which, if passed, will curtail the legitimate use of power boats on certain waters. Vigorous opposition to such destructive measures is usually necessary to prevent their passage, or to force desirable amendments.

With the Federal laws governing the operation of motor-driven craft we have no quarrel. They were devised for the safety of those who use such boats, as well as to safeguard the rights of others using Federal waters. Likewise, bills regulating speed in harbors and after dark are usually drawn with a view to safety alone and are not in any sense class legislation. But bills barring or curtailing the use of pleasure boats on public waters are vicious and discriminative. In Massachusetts several regulatory bills were referred recently to the Committee of Public Safety, before which both proponents and objectors were heard. At this hearing a proposal was made to appoint a permanent state commission to study all such bills and offer sane, proper, and workable legislation.

It would be wise if other states followed the same procedure and established a committee on safety to study and recommend all proposed laws affecting the public on state waters. If such a committee were non-political in make-up and composed of men of such standing in the community that they would inspire confidence, all insidious legal menaces to the proper use of public waterways or lands could be handled with assurance of a fair hearing and just, equitable and workable laws.

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Save Great South Bay for the Boatmen

WHILE on the subject of state legislation, a case in point may be cited that has been reported to us by the yachtsmen of Great South Bay, that big body of water on the south side of Long Island that gives such excellent boating to untold thousands who live in the vicinity of America's largest city. It appears that the State of New York proposes to construct a causeway across the bay, cutting it in half and practically breaking it up into two bays. There seems no real need for this at the present time, and the various yacht clubs situated on the bay are making formal and vigorous protest. Such a viaduct or causeway would be a serious menace to navigation, an unnecessary interference with the enjoyment of these Federal waters as a place for boating, fishing and shooting, and a blight upon the natural beauty of those waters. It is hoped that these considerations will prompt the Federal government to refuse permission to cut the bay in two.

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Navigation Simplified and Up to Date

TO THOSE of us who have struggled with Bowditch, sweated over the tables of Dreisonstok and Weems, or looked doubtfully upon the result of a couple of sights grabbed off the bucking deck of a small yacht, there is renewed hope for the achievement of the dream of every navigator — a "fix" by one sight. At least this is so if we can believe no less an authority than Peter B. Kyne, master of sea writers.

From chapter VII of his latest book, *The Island of Desire,* we find the skipper working up his noon position as follows:

"A glance at the chronometer showed him that it lacked five minutes of noon, so he brought the chronometer up on deck, together with the sextant, and almost exactly at noon measured the angle between the sun and the horizon and figured the latitude and longitude of the schooner's position."

Great! No more waiting for the sun to change its angle or for a twilight "shot" at an elusive star. But perhaps this Teller of Tales overestimates our credulity.

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Ocean Racing Rules

TO THOSE who have been criticizing without careful study the Ocean Racing Rule used in the last two Bermuda races, we commend the article on pages 98 and 99 of this issue. It disposes, we think, of the claim that the rule tends to develop a particular type of ends, or favors any particular rig. The makers of the rule had no such thought in mind. Their sole aim was to get some means of measuring fairly a large existing fleet of cruising yachts, to encourage a wholesome type for offshore racing, and to prevent excesses, as far as possible. In the races where it has been used the results were most satisfactory. And this, in the main, is the final proof of any rule.

IN THE WORLD OF YACHTING

BRIGGS S. CUNNINGHAM

ONE of the younger yacht sailors to win honors in international racing, as well as in his home waters, is Briggs S. Cunningham, of the Pequot Yacht Club, Southport, Conn. Only a short time ago an undergraduate at Yale, he has already sailed in two international matches on this side of the Atlantic, and last spring he followed the Mediterranean circuit in the Six-Metre Class.

Much of Briggs Cunningham's early experience was gained in the hotly competitive Star Class, and as a member of the Yale team in two of the intercollegiate matches, in which he sailed in an Eight-Metre and in a Class S yacht. In 1928 he was part owner, with F. T. Bedford, of the Eight-Metre "Loke," which he sailed a good part of that summer. The next year he bought the Six-Metre "Akaba," which won the Seawanhaka Cup in 1928, and renamed her "Lucie." That season he won the championship in the Sound with her. Taking "Lucie" abroad the following spring, he won the series championship in fast company on the Riviera, and last summer he and this fast "Six" were chosen for the American team picked to meet the British in the British-American team match sailed off Oyster Bay. The American team won overwhelmingly, and "Lucie" was the high point boat in the match.

This year he has a new "Lucie," from designs by Clinton H. Crane, which he raced in the recent Six-Metre match against the Bermuda "Sixes," sailed in Bermuda waters.

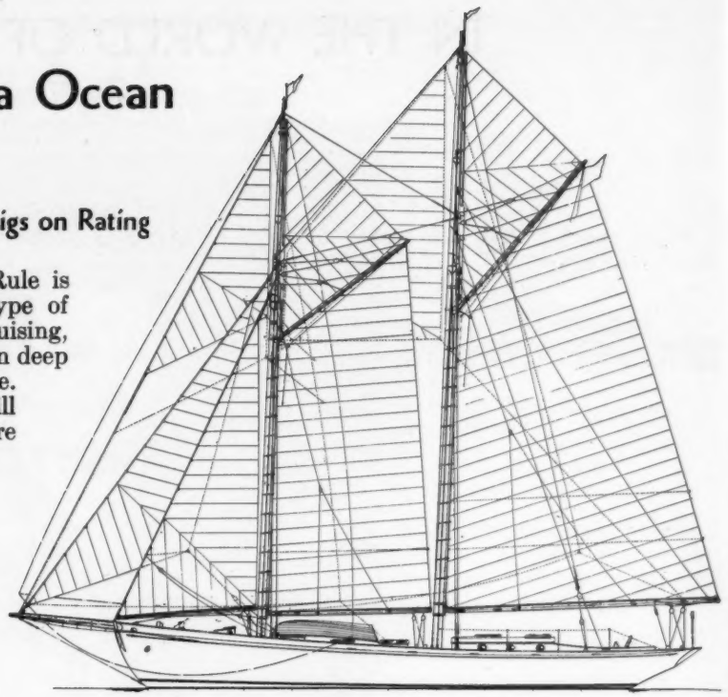
In most of the races, his wife, the former Lucie Bedford, who won her laurels in the Star Class, sails with him and has proved an able assistant.

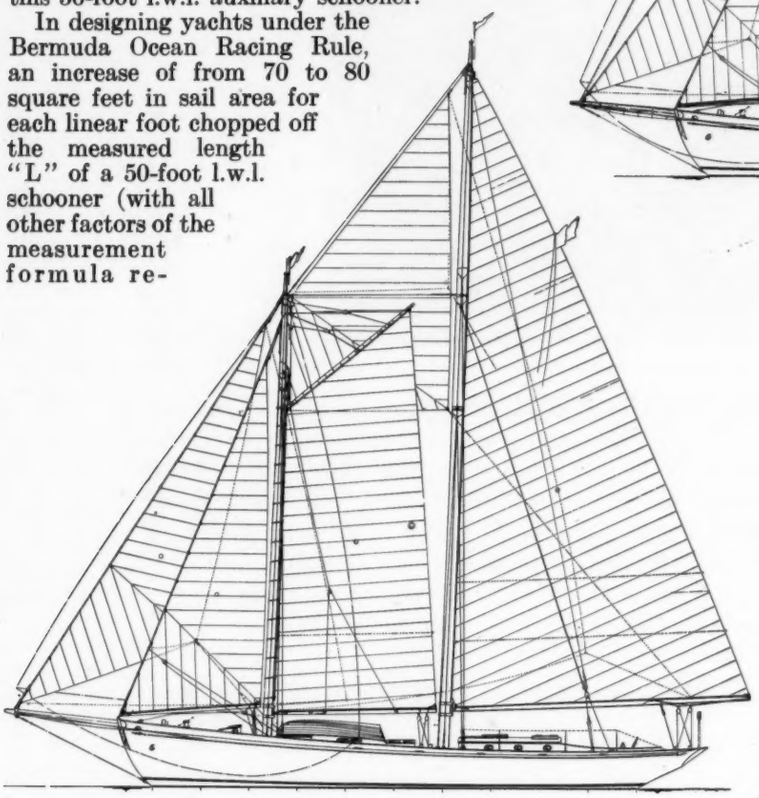
Analyzing the Bermuda Ocean Racing Rule

The Effect of Sail Area and Different Rigs on Rating

THE present Bermuda or Ocean Racing Rule is meant to develop a distinctly healthy type of craft, seaworthy and comfortable for cruising, and yet capable of showing a good turn of speed in deep sea racing, but not in any sense a racing machine. Only by producing these qualities in a yacht will the lure of the sea inspire and encourage offshore racing. To meet these conditions, the firm of Cox & Stevens, Inc., has designed this 50-foot l.w.l. auxiliary schooner.

In designing yachts under the Bermuda Ocean Racing Rule, an increase of from 70 to 80 square feet in sail area for each linear foot chopped off the measured length "L" of a 50-foot l.w.l. schooner (with all other factors of the measurement formula remaining constant) will be readily recognized as the motive for "bobtailing the stern" on some recent creations under this rule. These chopped off counters, while adding to the driving power by allowing an increase in the sail area, have not altogether been considered a mark of beauty; furthermore, the short overhang aft leaves but limited space on deck between cockpit and counter for the locating and handling of the various deck gear, such as mainsheet, topmast backstay, spinnaker guy, sheets for light sails and boom gallows; while difficulties are encountered in reefing the mainsail because of the boom extending well beyond the stern.





Sail plans of a 50-foot water line schooner designed by Cox & Stevens to the Bermuda Ocean Racing Rule, showing three rigs, gaff, jib-headed with gaff foresail, and jib-headed staysail rig. The over all length is 61 feet, and the sail area 2315 square feet in the gaff rig, and approximately 2250 in the jib-headed rigs

In the design shown on this page, it has been attempted to create a craft that will in rating and speed compare favorably under the

Bermuda Rule with other yachts of about the same size, and at the same time represent a very normal type of deep sea cruising boat, with special attention paid to the comfort of the layout below deck. Her dimensions are: l.o.a., 61.00 feet; l.w.l., 50.00 feet; beam, 15.50 feet; draft 9.25 feet. The size of the yacht was determined by the desired accommodations and quarters.

The freeboard forward is 6′ 1¼″, aft 3′ 11″, and least, 3′ 6¼″; displacement, about 40 tons.

While this boat was designed under the present Bermuda Rule with the measured length taken at 4 per cent of the water line length above this line, it will also take full advantage of the proposed change in this rule, using 4 per cent at the bow and only 2 per cent at the stern, as already adopted by the Race Committee of the New York Yacht Club for the Cruising Class, which change will not appreciably improve the rating of a boat with the abbreviated stern.

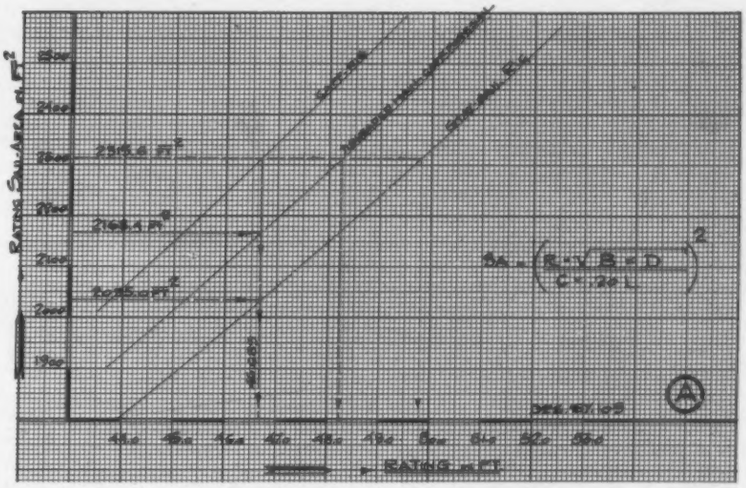


Diagram A, showing the influence of the formula on rating and sail area

Diagram "A", herewith, demonstrates the rating formula's influence upon rating, "R," and sail area, "SA," for the three different types of rig; that is, with a rig allowance of 90 per cent for gaff-rigged schooner, 93 per cent for jib-headed mainsail and gaff foresail schooner, and 96 per cent for staysail schooner. With the abscissa of this diagram showing the rating, "R," each unit representing one foot, and the ordinate showing the measured sail area, "SA," each unit representing 100 square feet, the three curves demonstrate the relation between measured sail area and rating for the three rigs in the above named order. This, of course, is true only when all other factors of the rating formula remain constant, in other words when the calculations are made for the three different rigs on precisely the same hull lines, which is the case in this design. The gaff-rigged sail plan has a rating sail area of S.A. 2315.60 square feet, and a rating R.46.689 feet, and if all three types were to sail on even terms, that is without any time allowance, we have this table for comparison:

	Bermuda Rule Rating	*Measured Sail Area*	*Difference in Sail Area*	*Time Allowance*
	Feet	Square Feet	Square Feet	
Gaff-rigged schooner.....	46.689	2315.60	0	0
Jib-headed mainsail and gaff foresail schooner...	46.689	2168.39	147.21	0
Staysail schooner.....	46.689	2035.00	280.60	0

By making the measured sail area constant, we get the following data:

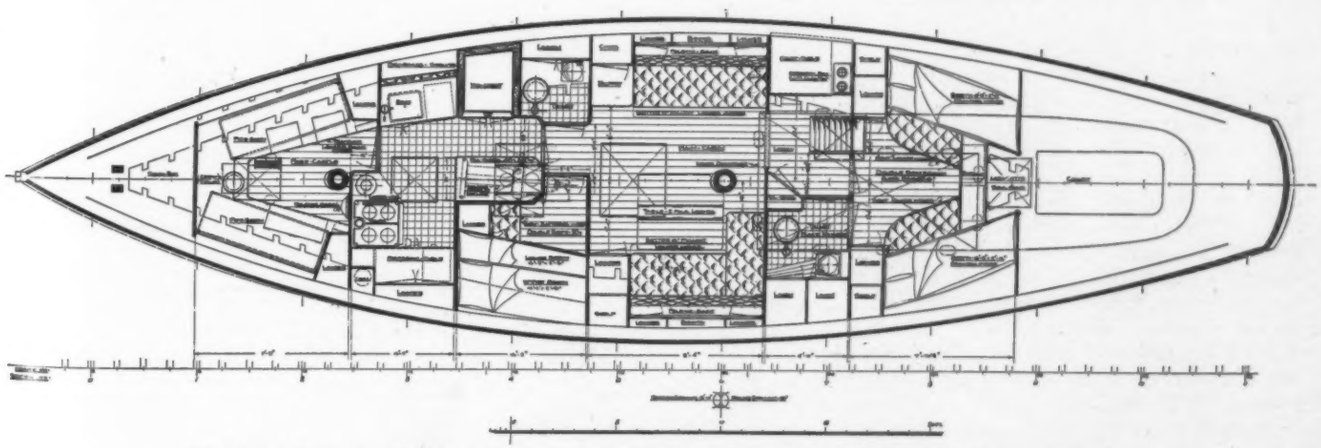
	Bermuda Rule Rating	*Measured Sail Area*	*Difference in Rating*	*Time Allowance Given to Gaff Rig*
	Feet	Square Feet	Feet	Sec./N.M.
Gaff-rigged schooner.....	46.689	2315.60	0	0
Jib-headed mainsail and gaff foresail schooner....	48.245	2315.60	1.556	5.12
Staysail schooner.....	49.801	2315.60	3.112	10.02

This indicates that under the Bermuda Rule the staysail rig, with a rating area of 2315.60 square feet, is regarded as being 10.02 seconds per nautical mile faster than the gaff rig with the same rating area, or will have to reduce the area about 280.60 square feet, that is 12.11 per cent, in order to sail on even terms with the gaff-rigged schooner. In other words, with the same measured sail area, the staysail schooner would have to allow 1 hour, 50 minutes, 13 seconds to the gaff-rigged schooner on the 660 nautical miles run from New London to Bermuda; and, on the same basis, the jib-headed main with gaff foresail schooner would have to allow 56 minutes, 19 seconds to the gaff-rigged schooner.

The sail plans shown in the three accompanying designs give the following data:

	Bermuda Rule Rating	*Measured Sail Area*	*Difference in Rating*	*Difference in Sail Area*	*Time Allowance Given to Gaff Schooner*
	Feet	Square Feet	Feet	Square Feet	Sec./N.M.
Gaff-rigged schooner	46.689	2315.60	0	0	0
Jib-headed mainsail and gaff foresail schooner	47.557	2249.93	.868	65.67	2.87
Staysail schooner .	49.120	2253.00	2.431	62.60	7.90

(*Continued on page 130*)



The layout shows two double staterooms and a large main saloon sleeping eight persons in owner's party

Modeled upon the lines of an Isle of Shoals double-ender, "Palm" was given a pinky stern

"Palm"—A Modern Pinky

By JOHN MEAD HOWELLS

IN 1929 I was the owner of what I believe to be the last of the Isle of Shoals double-enders, *Alice*, built at Kittery, Maine, about 1875. Although sound, her lap-streaked construction could not be made tight and I had to give her up. When I had her she was yawl-rigged.

I took off her lines myself and used them in *Palm*, my present boat, which was built by Clement Clark, at Kennebunkport, Maine. I lengthened the new boat between one and two feet over the old model, gave her five inches more freeboard, modified her stem, which in the old boat had an actual tumble home, and used the type of stern found on the old fishing schooners called "pinkies," which were built up to the year 1845 on the Essex River. I believe this boat to be the only true pinky built since the *Maine* was launched in the year mentioned above, and dismantled at Jonesport in 1924.

Palm is rigged as a ketch, as shown, the sail plan being drawn by Ford, Payne & Sweisguth. She has surprised us all with her extreme buoyancy and seaworthiness in the bad chops that we get off the Isle of Shoals and off our ledge-infested coast. The old fisherman who sails with me says that you "cannot drown her." The pinky stern originally had two purposes, first, that of safety in a following sea, but, more generally, as a place in which to set the long main boom during the periods when these schooners had to lie at anchor in a rough sea on the Banks, when much of their gear was injured by the constant slatting.

As *Palm* is used only as a family sailing boat, she is given over mostly to an abnormally large cockpit or deck. For cruising purposes, it would be necessary to lengthen the cabin.

As arranged at present, the small cabin forward has only two full length transoms, two feet in width, extending up into the bow. There is a deck about fifteen inches wide around the cabin trunk and cockpit.

The dimensions of *Palm* are: length over all, 29½ feet; water line, 26 feet; extreme beam, 9½ feet, and draft of water, 4 feet. She is bored for auxiliary power.

How to Build a Husky Ten-Foot Tender

A Modified Dory Which Accommodates an Outboard Motor and is Easy to Build

By VICTOR SLOCUM

THE dory skiff described in this article is well adapted to the requirements called for in a small yacht tender. The molds were taken directly from a good model of the kind, on the beach at Swampscott, Mass., where this type was developed. It is a rough water product, naturally worked out. It will be found to tow well and to have an abundant carrying capacity, and a husky chap can haul one like this over the rail by himself, if need be.

The designs are self-explanatory and work out well in practice. First of all, enlarge the lines to full size on a sheet of heavy building paper, stretched out on a wooden foundation, so you can use brads for holding the battens in place while marking. In laying down, as it is called, be accurate about the squares and parallels as well as the dimensions. This is the method used by regular boatbuilders and must be closely followed in all cases if the finished boat is to be like the design.

Strike the base lines with a chalk line, and sweep in the curves with a fair batten held by brads on both sides. Check for fairness. Draw in the stem, transom, and the cross section of the after cleat. By this means you will get all the correct bevels as well as a general preconception of the entire job. While still at the drawing, lay down the sections shown in Figs. 2 and 3, for frames Nos. 1 and 2. Fig. 4 shows a cross section of the boat which explains construction and technical terms.

Bill of Materials

BOTTOM BOARDS: Two pieces $\frac{7}{8}$-inch pine, 8′ by 13″.

PLANKING: Six pieces $\frac{5}{8}$-inch white cedar or pine, 12′ by 9″.

TRANSOM: One piece oak plank, $1\frac{1}{2}$″ by 17″ by 3′. This will be heavy enough for a four horsepower outboard motor; if no motor is to be used buy $\frac{7}{8}$-inch stock.

KNEES: Four hackmatack or oak knees, sided $\frac{3}{4}$″. Do not get the knees until the paper patterns have been made, after which you may place the patterns directly on the stock so as to tell the shape needed.

STEM: Oak, 2″ by 6″ by 3′.

BATTENS FOR SEAMS: Two pieces oak, $\frac{1}{2}$″ by $1\frac{3}{4}$″ by 10′.

RISERS: Two pieces pine $\frac{5}{8}$″ by 2″ by 10′.

THWART: One piece $\frac{7}{8}$″ pine, 10″ by 3′ 6″.

SEAT: Pine, $\frac{7}{8}$″ by 14″ by 3′.

CLEATS: 16 running feet oak, $\frac{7}{8}$″ by $1\frac{1}{2}$″, and 12 running feet oak, $\frac{7}{8}$″ by 3″.

NAILS: 2 pounds $1\frac{1}{2}$″ chisel pointed galvanized boat nails. 2 pounds blunt-pointed galvanized boat nails. Get the nails at a place where marine goods are sold. 2 pounds 10d common wire galvanized nails. 1 gross No. 10, $1\frac{1}{2}$″ brass screws. 1 galvanized iron eye bolt for painter. Have this bolt 4 inches long from shoulder of eye to end, which must be threaded and provided with nut and washer to set up on back of stem. In this way it will never come adrift.

CAULKING AND PAINTING: Get a pound of cotton lampwicking, 1 pound of white lead putty, and two quarts of paint.

Of a tool kit, the more the better, and the best is none too good. The special items for this job are Nos. 4 and 6 Syracuse bits, a small caulking iron, drawknife, vise, large hammer or flat iron for hold on, small spirit level, plumb bob, and some sort of a work bench. If you decide to go in for copper fastening, a hand drill and nail cutters are essential.

For a foundation horse, Fig. 9, you will need a 6-foot piece of 2-inch plank, at least 6″ wide, as well as a little 2″ by 3″ of the same wood. Spruce will do. This foundation horse is to build the boat upon, as it is built upside down, and must have a firm base.

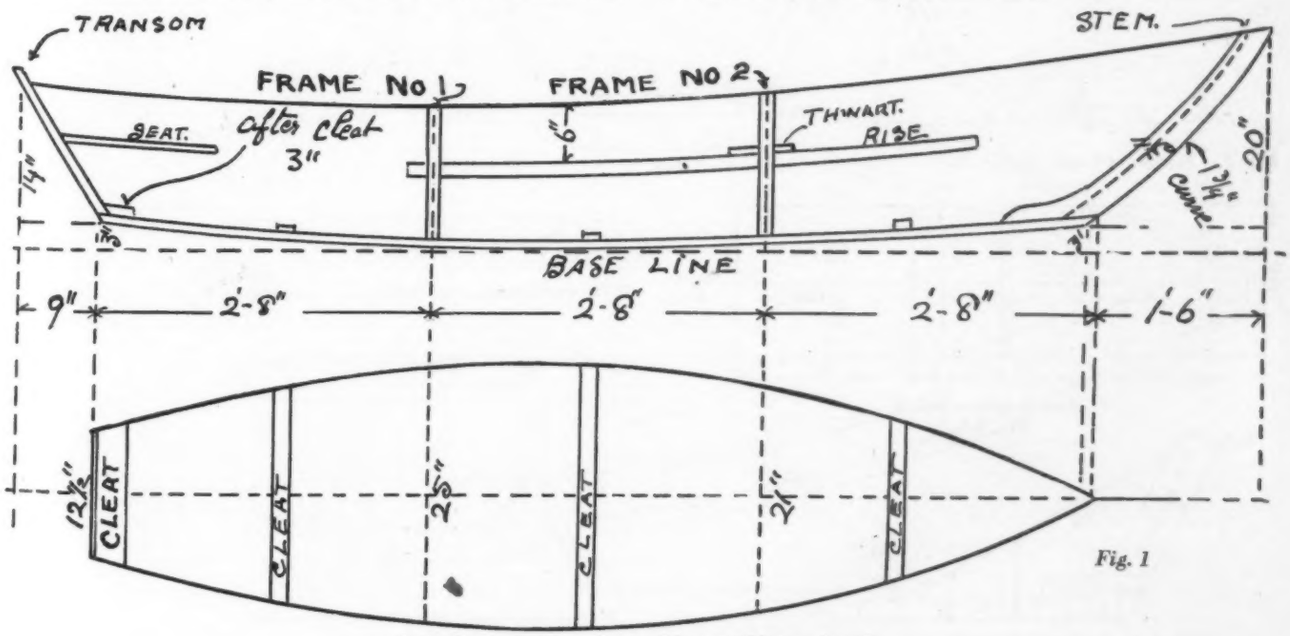


Fig. 1

General construction plan and layout of bottom boards

We are now ready to make the bottom piece of the boat. Plane up the best edges of each of the 13-inch boards so that they will fit neatly together, and mark "outside" on the best side of each board to denote the bottom face. Now, on the outer edges take off a corner with your jackplane, just enough so that when the boards are clamped together there will be a 1/16-inch caulking seam, shown in Fig. 4.

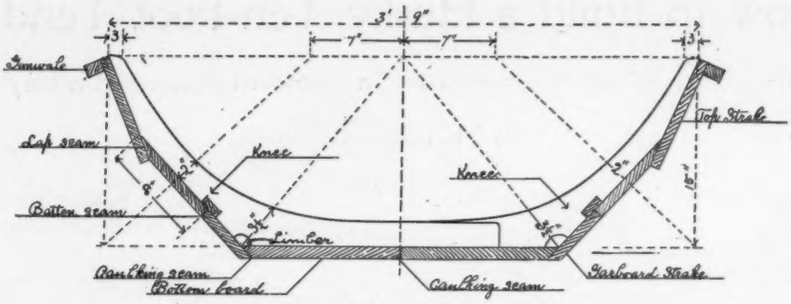


Fig. 4. Cross-section with names of various parts

Put the boards "outside" down on some horses, and wedge them tightly together. With the seam as a center line, and with Fig. 1 as a guide, square off the frame sections, and observe that the bottom is 12½" at the transom, 25" at No. 1 frame, and 21" at No. 2.

Having lined off the sides and drawn as fair a curve as you can, cut out and fasten on the cleats (⅞-inch by 1½-inch oak) in between the frame sections, keeping the ends to the line. Use small nails for this, that will not go through, and drive two or three in each board. Fasten on the after cleat lightly in the same way, then turn the whole thing over on the horses and drive in the 1½-inch screws in all the cleats, about 4" apart. For this, bore into the oak with the No. 4, and ream out the pine with the No. 6. Use soap on the screw points, and drive with brace and screw driver bit. Sink screw heads just enough to putty.

We are now ready for the transom. Cut, cleat, and fasten as indicated in Fig. 8. Make the stem from the construction plan, and fasten to bottom board with 2-inch, No. 10 screws, driven from the bottom into the stem, having a care that the foot of the stem is in line with center of boat. The stem beard-line is 1¾" from face.

When you mark off the knees, have the foot of each knee long enough to reach nearly across the bottom of the boat, so that when fastened together they will look like Fig. 3.

Fasten the frames together right on the floor drawing, with the blunt point nails, boring for them first. Before taking the frame up from the floor, fasten a spall across the top with a screw in each end. Be sure to mark the center while on the pattern.

Fasten the frames in place on the bottom board with blunt pointed nails driven from the bottom, but before doing so notch the heel of each frame for a limber as seen in Figs. 2, 3, 4.

Now a hint about fastening the frames. While the work is in an upright position, clamp frame in place and drive up a couple of screws from bottom side. Then turn the whole thing over, rest the lap of frames on something solid and soak in your blunt points, without boring, spaced about 3" apart in each frame, setting them well into the wood with a nail set. In this way everything will be "wood and wood," and solid. In other parts of the work always hold a hammer or weight near a fastening when driving so that it will feel solid. If it is a new experience you will soon get used to it and see the reason.

Lay the plank for the foundation horse on the floor, about midway between the ends, and flush with the base line. Mark on it the 3-inch sweep of the bottom, the location of Nos. 1 and 2 frames, also the location of the cleats.

Remove the spalls from the frames, turn boat over,

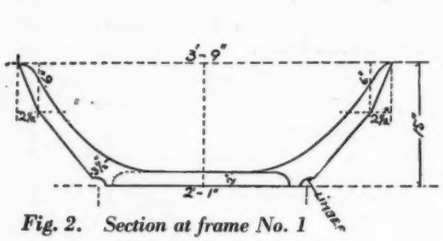
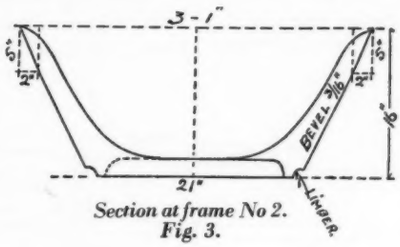
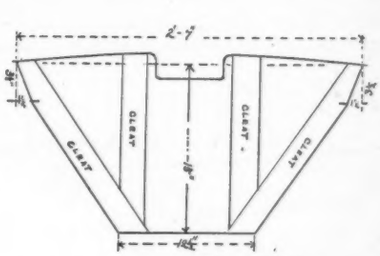


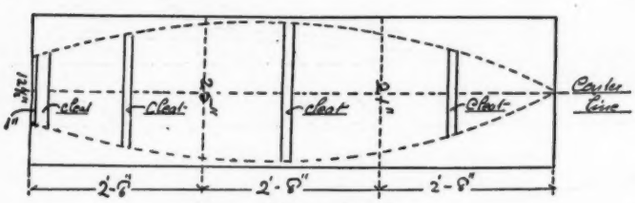
Fig. 2. Section at frame No. 1



Section at frame No 2. Fig. 3.

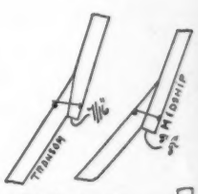


Stern transom Fig. 8.

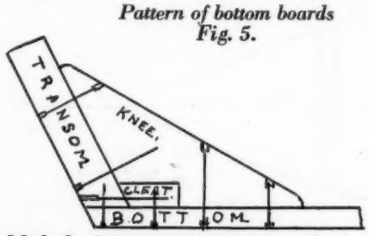


Pattern of bottom boards Fig. 5.

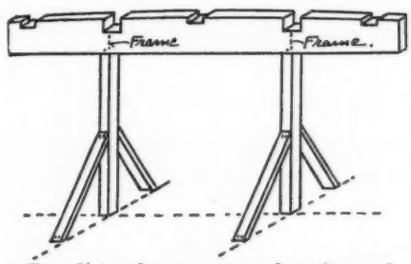
Method of bending and "bradding" a batten Fig. 6.



Method of beveling Fig. 13.

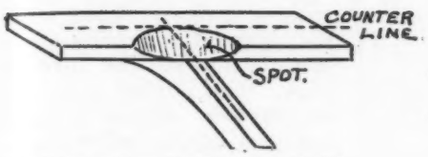


Method of fastening transom and after cleat. Fig. 7.



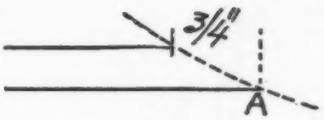
Foundation horse to carry boat inverted while building. Fig. 9.

Fig. 10



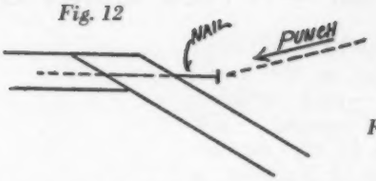
Spotting and counter lining for bevel

Fig. 11



A lapstrake bevel

Fig. 12



Correct method for driving nails through garboard without splitting the plank

Fig. 14

Clenching fastening of lapstrake

and set bottom on the foundation horse, center to center. Tack a nail or so in the middle where it touches the horse to keep it steady, put the spalls back across the frames, just as you took them off, seeing that the screws go back into the very same holes they came out of. Spring the bottom down to the sweep of the horse by putting a shore at each end to the ceiling, and tack it in place. Bring center marks on spalls to center lines on foundation uprights. Plumb the stem, and brace well to floor; level the transom, and brace well to floor also.

You are now ready to spot, counter line, and work the bevel on bottom board to receive garboard. Run in the seam batten as shown in Fig. 4. Work the knuckle plank first, with a square seam to center of batten, and lap bevel at knuckle. The knuckle edge of the plank is worked first, touching its respective points, and then planed to a square edge. Set your gauge to 1½" and gauge the "out" side of each. Work a fair bevel, and fasten in place. Then work your garboard, bore for your 3-inch garboard nails, and, when driving these, have a care not to approach the garboard too closely with the face of your hammer, but use a punch, canted as shown in Fig. 12.

The spiling for the top strake is simple; just wrap it around in its place, have the other fellow hold it up close, crawl in under, and mark over the edge of the plank already beveled. The line thus found is IT, but must be faired up with the batten and planed fair and square. The change in the bevel lap is shown in Fig. 13.

When the top strake is fitted to your satisfaction, fasten to ends and frames, and clench the lap together with the chisel pointed nails, which should be spaced about 3" apart. And now a pointer about clenching. Bore off the strake with the No. 4 bit, and incline the holes to a right angle with the lap as shown in Fig. 14, and one-half inch from the edge. Hold a big hammer near while driving the nails, and see that the chisel points are at an angle of 45 degrees with the grain of the wood.

The clenching may be left until the boat is turned right side up, when it can be done much easier, being careful to turn the chisel point away from the feather edge of the inside plank, allowing each clench to be buried in good solid wood. If the outside hammer has a convex face you can draw the nailhead in enough to putty by having it held hard while you strike smartly on the clench; and this will make sure that you draw the wood well together.

While the boat is still on the horse and well stayed, trim the plank ends with the plane, and caulk the seams; after which you may put on the outboard stem strip. Then you may turn your boat right side up on the horses, trim the top sheer, put in the extra frame cleats, and risers for the thwarts and seat. Taper the gunwale strips to one-half inch at the ends and between the frames; fasten with screws from the inside. The thwart is generally loose, but I think it ought to be fastened in for a place to which the oars can be padlocked.

Have the eye of the painter bolt outboard about halfway down the stem, to make her tow the best.

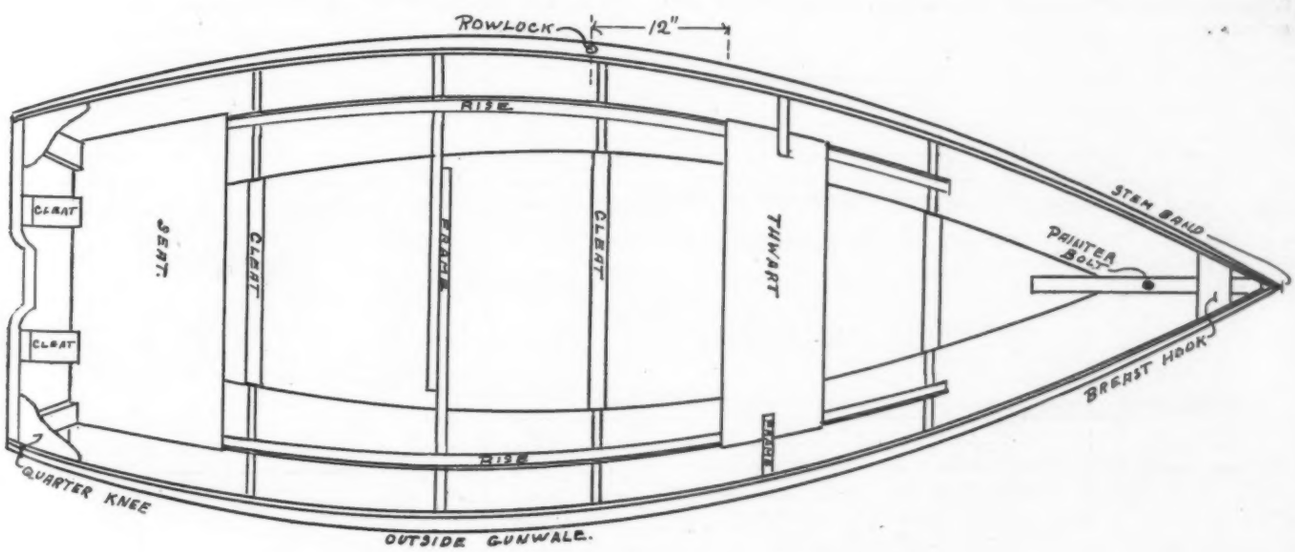


Fig. 15. The completed boat showing risers, seats, and knees

"Narwhal"—A New Cutter Developed From the Plans of "Tidal Wave"

THOSE who have followed the articles on the ketch *Tidal Wave* — and cruising yachtsmen, in general — will be interested in the accompanying plans of *Narwhal*, a classy 40-foot jib-headed cutter now practically completed at the Minneford Yacht Yard, City Island. For *Narwhal* is a direct descendant of *Tidal Wave*, P. L. Rhodes, the designer of both boats, having cleverly added overhangs to the original craft and produced a handsome canoe stern cutter with larger sail plan which should bear watching during the coming summer. The dimensions of the new boat are: l.o.a. 39′ 11″; l.w.l. 31′; beam, 11′; draft, 5′; sail area, 864 sq. ft.

At first glance, *Narwhal* seems to bear little resemblance to *Tidal Wave*. But close inspection proves that the underwater sections are practically duplicates of *Wave's* sections; the keel profile has been changed a bit, with less forefoot and without the keel cut up aft. The longer ends produce remarkably long and easy diagonals, while the buttocks are not quite so steep aft. The above-water profile is easy and sweeping, while the longer deck line makes the boat appear quite slim when compared to *Tidal Wave*, though the beam is exactly the same.

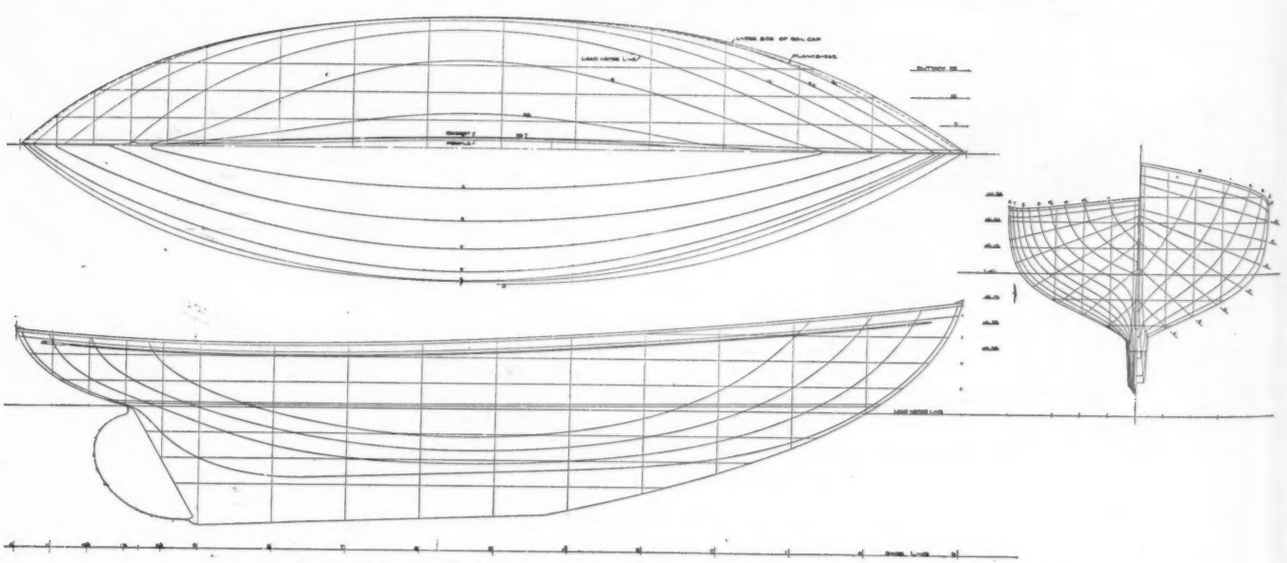
The rig contains 200 square feet more sail than *Wave's*, and is modern in every way, with hollow mast, roller reefing main boom and jib furling gear. A 4-cylinder Buda motor should drive her along at a fast clip. With more sail and more power, she should be a faster boat under any conditions, either under sail or power.

The overhang aft permits of a fine cockpit, while the forward overhang gives more space on the forward deck. The added over all length also allows a more spacious layout below decks. A double stateroom has been worked in forward, followed by the galley, ice box, etc., to port, and toilet room opposite. The main cabin has two built-in berths behind the transoms, while aft, to starboard, is a fifth permanent berth, with dresser, locker, etc., opposite. The motor is installed well aft, under the cockpit and bridge deck.

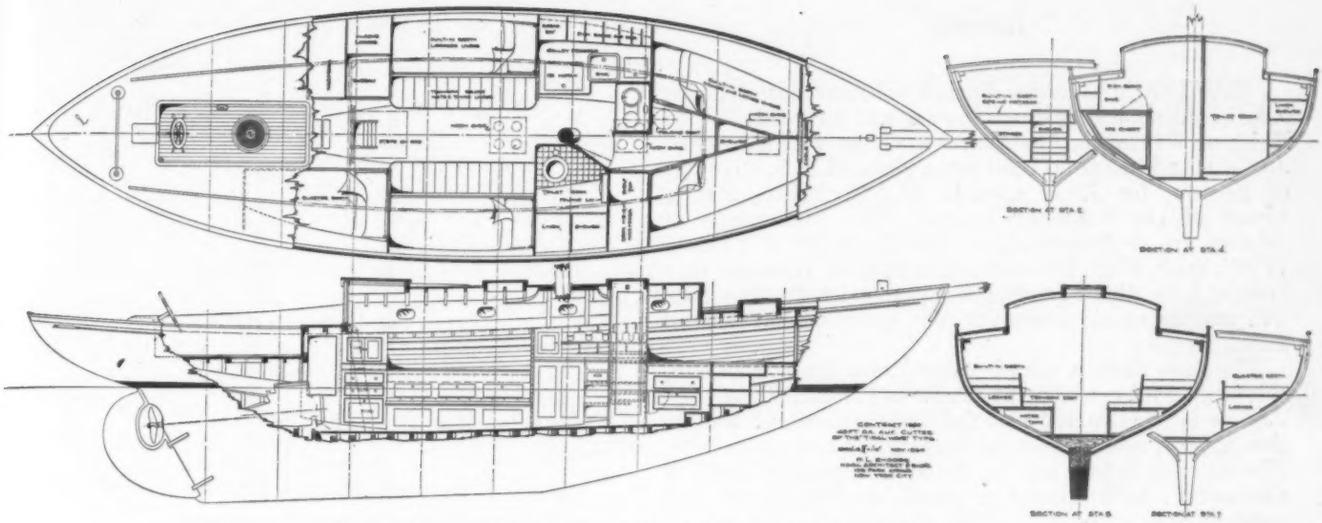
Construction is rugged and first class, with mahogany planking, lead keel, African mahogany trim, etc.

Lockers and stowage space, so necessary for real comfort on either long or short cruises, is well taken care of in various ways. The chain locker forward is of ample size for the stowage of anchor rodes, lanterns, and other spare gear. There is a nice hanging locker just abaft the forward stateroom, and fine shelves for linen in the toilet room. Then there are fine lockers under the built-in berths in the stateroom and main cabin, the two 40-gallon water tanks being placed under the transoms in the main cabin. An alcove locker, buffet, and drawers abreast the companion steps, and more lockers under the quarter berth, combined with hanging space for oilskins under the bridge deck, complete a locker and stowage plan which should prove more than adequate.

Narwhal is fastened with Everdur bronze screws and bolts, and equipped with bronze fittings and hardware throughout.



Lines and body plan of "Narwhal," a development of "Tidal Wave," designed by P. L. Rhodes



Interior accommodation plan of "Narwhal," described on preceding page

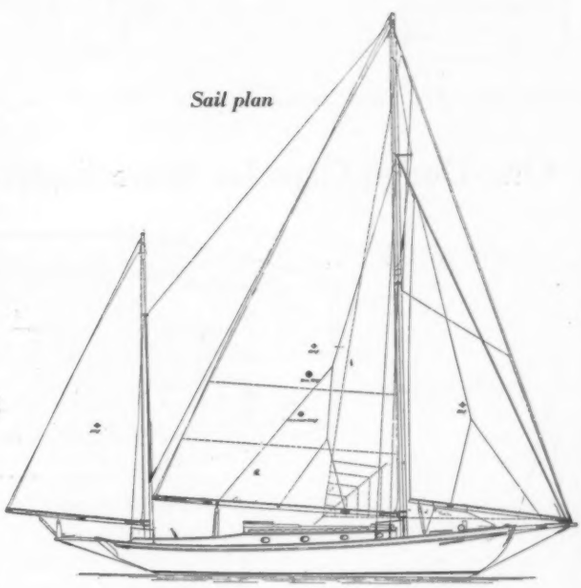
Appearance, Speed and Comfort in This Jib-Headed Auxiliary Yawl

BELOW are the plans of a handsome jib-headed auxiliary yawl from the board of John G. Alden, of Boston, which is now nearing completion at the Goudy & Stevens yard, East Boothbay, Maine. Her owner, Edward Jastram, of Providence, will use her for cruising in waters adjacent to Sakonnet, R. I., her home port, and may try his luck in a couple of races for cruising boats during the coming season, as she appears to be a craft which can hold her own in pretty fast company. Her dimensions are: l.o.a. 37′ 6″; l.w.l. 27′ 6″; beam, 10′ 3″; draft, 5′ 9″; sail area, 800 sq. ft.

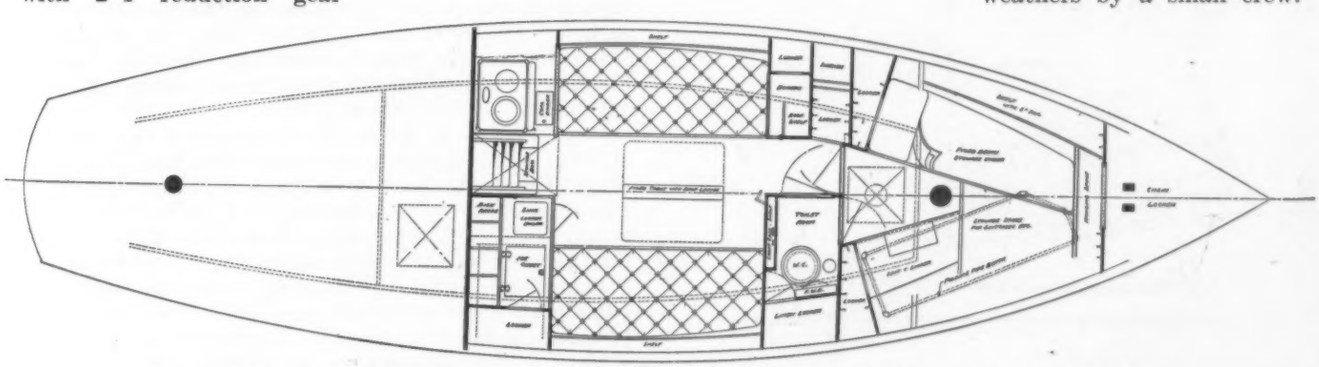
The design is an enlargement and improvement on the successful *Malabar Jr.* model yawls, while the construction is rugged and high class, with mahogany planking and trim, etc. A 25 h.p. 4-cylinder Falcon motor, with 2–1 reduction gear should drive her at better than a 7-knot clip. A feathering wheel will cause but little drag.

The interior arrangement shows a comfortable main cabin with four berths, the galley being aft to port, with ice box, etc., opposite. A toilet room and linen locker is forward of the main cabin, to starboard, and opposite are lockers, shelves, buffet, book shelf, etc. A fifth berth is found well forward, where there are also excellent stowage space, clothes locker, chain locker, etc.

The motor is installed under the bridge deck, in a separate compartment, with access by means of a hatch in the bridge deck. The combined cockpit and bridge deck are larger than usual, affording more than average comfort for a large party on deck in fine weather. The rig is simple, efficient, and should be easy to handle in all weathers by a small crew.



Sail plan

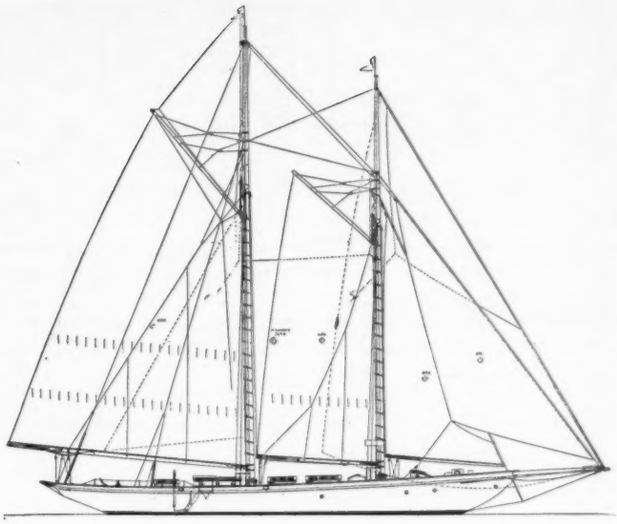


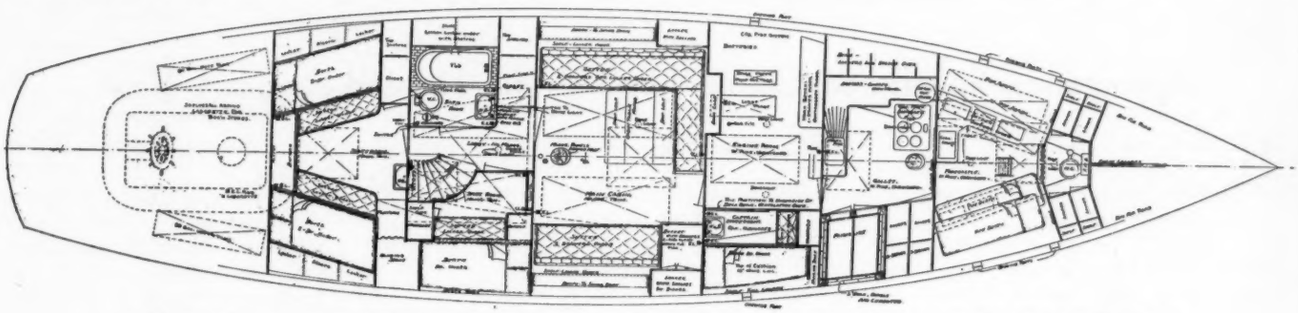
Accommodation plan of the auxiliary cruising yawl designed by John G. Alden for Edward Jastram, of Providence

"Jacinta"

A HANDSOME, husky, flush decked auxiliary schooner will soon slide down the ways at the yard of W. J. Reid, of Winthrop, Massachusetts. She will be named *Jacinta*, and has been built from plans of S. S. Crocker, of Boston, for J. E. Gerich, of Milwaukee, former owner of the schooner *Volante*. The dimensions of *Jacinta* are as follows: l.o.a. 76′; l.w.l. 56′ 3″; beam, 17′ 6″; draft, 9′ 6″. The sail area is 2690 sq. ft. in the four lowers. A Sterling Petrel motor, with 3-1 reduction gear, will provide ample power for good speed when the wind fails.

The lines show a vessel of moderate draft with considerable power, while the profile is distinctly pleasing. *Jacinta* is constructed and finished in excellent fashion throughout, and equipment is complete and up to date. The interior is laid out to the special requirements of the owner, with special emphasis on ventilation and comfort in every way.

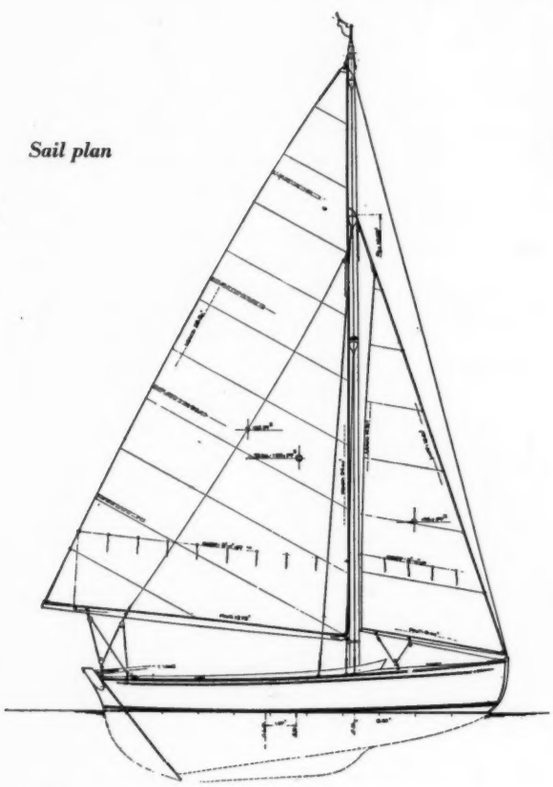


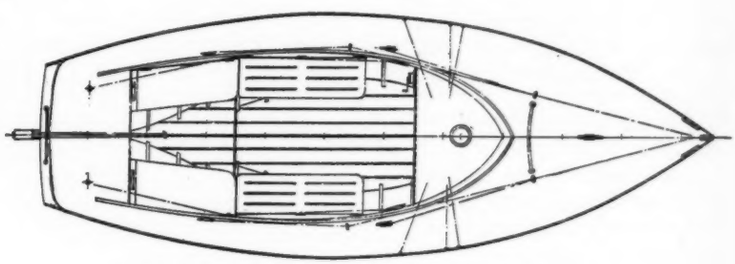


Sail and interior accommodation plans of "Jacinta," designed by S. S. Crocker, Jr., for J. E. Gerich, of Milwaukee

A New One-Design Class for Nova Scotia Juniors

Sail plan

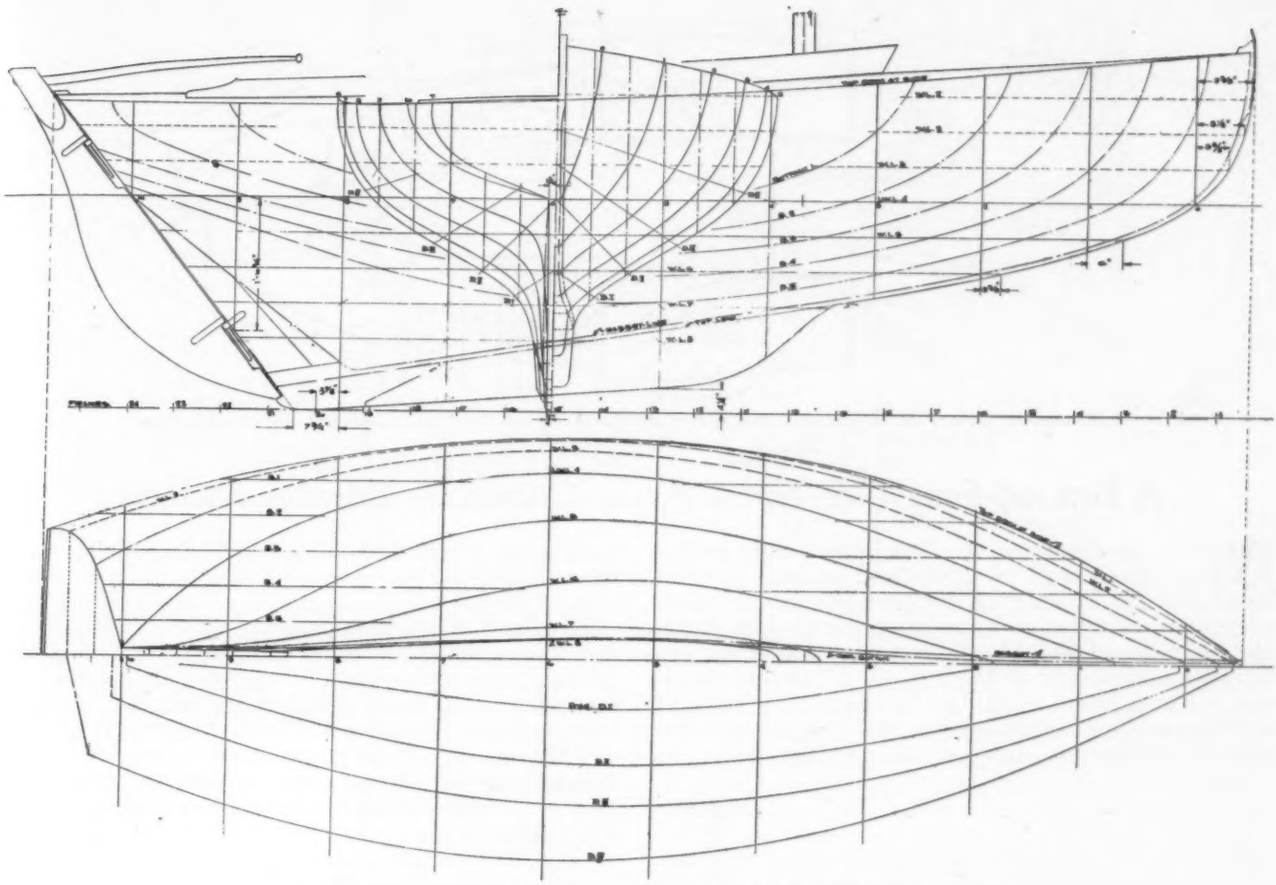




Deck plan of the new Nova Scotia one-design class

THE plans on this and the following page are the plans of a new class of boats for junior sailors, several of which are now nearing completion at the yard of Kenneth McAlpine & Sons, of Shelburne, Nova Scotia. The class is being sponsored by Captain Eugene O'Donnell for the younger generation of sailors on Milton Lake, Yarmouth, N. S.

In getting up the design, the architects, Cox & Stevens, of New York, were instructed that on a limited over all length the boats must be able and safe in rough going when handled by youngsters. Wherefore the ample beam, keel, and long water line. The plans show a husky, good-looking little craft, with good freeboard, and modern jib-headed sloop rig. They should be decidedly able, smart sailers, and, with their large cockpits, enjoyable little craft for grown-ups as well as juniors. The dimensions are: l.o.a. 17′; l.w.l. 15′; beam, 6′ 3″; draft, 3′; sail area, 197 sq. ft.



Lines and sections of the Nova Scotia one-design class, described on preceding page

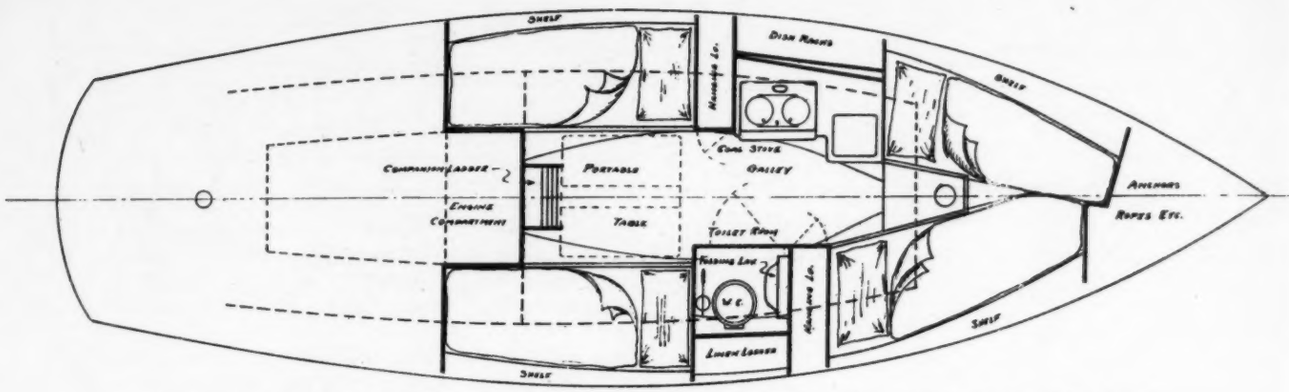
Three New Yawls Building for Down East Yachtsmen

UP AT the Kennedy Marine Basin, at Squantum, Mass., three attractive little auxiliary yawls are now under construction from plans prepared by the Boston Yacht Sales, Inc., of Boston, Mass. The accompanying sail plan shows a snappy little craft with lively sheer, moderate overhangs and modern jib-headed yawl rig of 600 square feet, the general dimensions being as follows: l.o.a. 31′; l.w.l. 23′6″; beam, 9′3″; draft, 4′11″; displacement, 13,000 lbs. Construction is strong without being unduly heavy, planking being of Indoako wood.

The sail plan is nicely balanced, with a mizzen of good size so that she should handle well under jib and mizzen, or mainsail alone. A permanent backstay from the main masthead does away with the nuisance of runners. The sail area is large enough so that she should show a fine turn of speed in the light and moderate weather usually encountered in average cruising in the summer months along the Atlantic coast.

A 4-cylinder motor is installed in a separate watertight compartment aft. There are two berths in the main cabin and two more berths forward in a space which may be curtained off for privacy. The 'midships galley, to port, is equipped with a coal stove, ice chest, racks, bins, etc., and there is a toilet room and hanging locker opposite. One of these boats may be seen in the Jeffries Ledge Race in June.

Sail plan

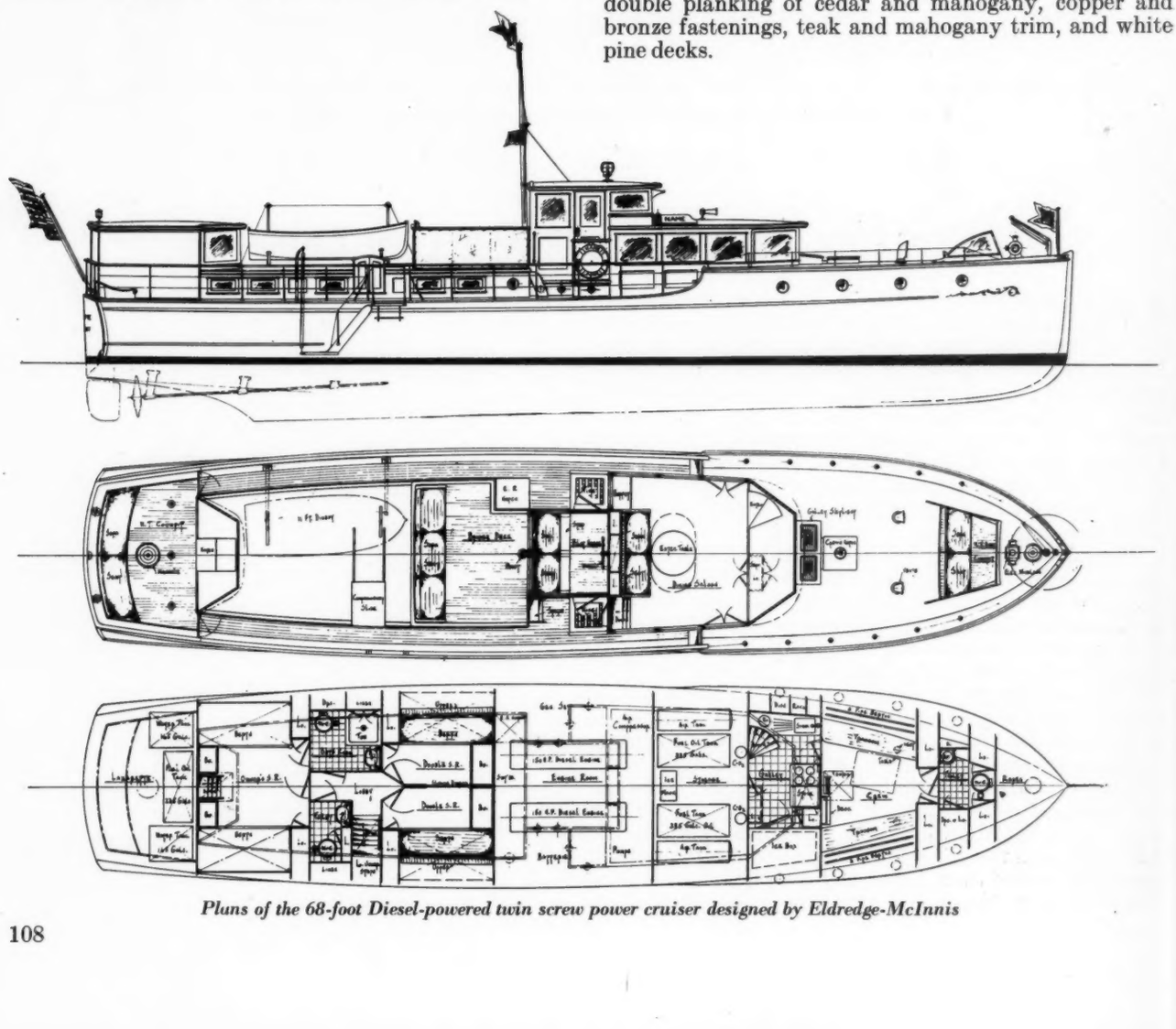


Accommodation plan of the 31-foot yawl designed by the Boston Yacht Sales, Inc., described on preceding page

A Fine 68-Foot Twin-Screw Power Cruiser by Eldredge-McInnis

BELOW are the plans of a handsome power cruiser from the board of Eldredge-McInnis, Inc., of Boston, Mass., in which is incorporated all the worthwhile features which go to make up the modern yacht. She is a 68-footer with 14-feet beam and 4 feet draft, and powered with a pair of 150 h.p. Diesel motors should step out at a 16-knot clip. The fuel and water capacity is sufficient for extended cruises, and she will have full electrical equipment, such as windlass, bilge pump, air compressor, Frigidaire, and hot and cold running water systems. A CO-2 fire extinguishing system is an assurance of safety.

The interior accommodations include three double staterooms, bathroom, toilet room, and crew's quarters for four men, with separate toilet room. The deck arrangement is excellent, with forward cockpit, dining saloon, enclosed pilothouse with wing bridges, bridge deck and after cockpit. Construction calls for oak frames and double planking of cedar and mahogany, copper and bronze fastenings, teak and mahogany trim, and white pine decks.



Pluns of the 68-foot Diesel-powered twin screw power cruiser designed by Eldredge-McInnis

Under the Lee of the Longboat.

by Cap Stan

PROSPECTS for the Transatlantic Race look better every day. Out of a raft of boats which were possible entries, it now looks as though eight American yachts were guaranteed starters — a pretty good bunch of small craft to gather together in a race as long as this. And just today I got it on good authority that the doughty British yawl *Ilex*, winner of a Fastnet Race and of a race from Plymouth to Santander, will be shipped across in plenty of time to start. And there is just a chance that there will be a 55-foot German ketch at the starting line. So, things are looking up. One ketch, two cutters, two yawls, and four schooners. A British entry, and possibly a German. The start of that race should be a dandy to watch. And the finish —?

+ + +

No sooner does Gar Wood go out and grab the honor of being the first chap to officially break 100 miles an hour on the water, when this English chappie, Kaye Don, goes him a couple of miles better in the rejuvenated *Miss England II*. Now Gar is back in Florida waters with *Miss America IX*, trying to get the record back again. He may, but they tell me that *Miss England* has far more powerful motors than those in Wood's craft, and far more powerful than any power plant which we are able to produce in this country at this time. Maybe Don can let out another link or two, if he has to. Looks as though the record might be pushed up several notches before the season is over.

+ + +

Three blimps which just cruised majestically past my window — or, to be more exact, over my head — remind me that a prominent yachtsman predicted not long ago that it would be only a few years before we should see our larger yachts racing off Newport or thereabouts, with the owners and crews commuting on week-ends from New York, Boston and other cities by means of seaplanes, which would be a common sight in our yacht harbors, moored out in front of the clubhouse just as our yachts are moored today. The exodus of the larger yachts from Long Island Sound would be a natural move, as Sound racing is very mediocre for large craft. With the further development of the seaplane, the problem of quick transportation would be solved. When all this comes to pass, we can scratch our noodles and wonder what will happen next.

Rumor has it that the Sound Interclubs have let it be known that they are ready and willing to engage in a team race with the Marblehead Triangles, and suggest that Newport Race Week would be a good time to stage the battle. Well, if you ask me, the Triangles are the ones who should do the challenging. For back in 1927 the Interclubs did everything possible to inveigle the Marblehead crowd into a team match in neutral waters, but Marblehead couldn't be aroused, claiming that they couldn't give up one of their championship matches on a week-end for the mere sake of taking the Interclubs into camp. So the Interclubs went out and arranged a match with the Jamestown Triangles, duplicates of the Marblehead boats, and traveled up to Narragansett Bay and gave the Rhode Islanders a sound thrashing. So, as it stands, Marblehead should be the challenger, and make an effort to retrieve the reputation of Triangles in general. And there's a good chance they could pull the trick, for with one exception, the Jamestown boats were very poorly sailed — and that one exception made it mighty interesting for the Interclubs until overwhelmed by force of numbers. The Triangles are fast, and so are the Interclubs. Another match between them should produce some real fireworks.

+ + +

The measurement rule used in most ocean races on this side of the pond, generally termed the Bermuda Race Rule, has had to stand a lot of criticism lately, said criticism being aimed at the "chopped off" appearance of the counters of some of the boats designed under the rule. One boat with quite a homely stern appeared for the Bermuda Race last year. One of the boats entered in the Transatlantic Race has a stern which does not appear to be exactly beautiful. The hull designs by Paine, Belknap & Skene in the March issue (page 99) show what I mean. Well, I fully agree that a rule which encourages, or necessitates, such counters has a weak spot in it. But is it necessary? Some designers evidently think so. But Henry Gruber, of Cox & Stevens, disagrees. And to prove his point, he has designed a mighty sightly schooner, which gets a low rating, and which should hold her own with the fleet with ease. You will see the design of this boat, with an accompanying article, in this issue. Give it the once-over, and perhaps you'll see the answer to the rule critics.

Model Yacht Designing

Part III—The Guiding Principles

By CAPTAIN ALFRED TURNER, R.N.

TO UNDERSTAND the effects of the shape of a hull on its performance it is advisable to study that of the model yacht in its simplest possible form. From this we can learn much.

The great landscape painter, J. M. W. Turner, in his well-known picture of "Dido Building Carthage," which is hung in the National Gallery, London, places some youngsters in the foreground sailing model boats. These boats are of the general type shown in Fig. 21, a type which is instructive not only to beginners but perhaps to some of the veterans of the sport.

The reader is invited to imagine himself beginning to carve a model from a flat and square plank of light white pine, which, like other woods, varies in weight according to its quality and dryness — usually running about 35 pounds to the cubic foot. For the sake of simplicity, let us imagine that the pine is extra light, say, 32¼ pounds, so that it is about half the weight of fresh water. If, now, such a plank be chosen, say, 2 feet long, 8 inches wide by 1 inch thick — the length being immaterial for the moment — and placed in the water as in Fig. 22, it will immediately capsize.

Why does it capsize? According to what Archimedes says, it will float half in the water and half out; this it will do — *after capsizing*, but not before.

From Fig. 23 it is evident that as long as M is above G the model will right itself; so let the effects on the positions of M, B and G be considered if planks of different proportions are selected, then chiseled away on the bottom, then chiseled away on the top, then sharpened at the ends, and, finally, dug out with a gouge. I have worked out a few simple cases so that these effects can be seen at a glance. They are derived by the rules given previously, but it is not necessary for the younger students to concern themselves about the calculations as yet.

In Fig. 22, G is evidently on the waterline, B is halfway down from the waterline, and M is only 1/48th inch above G, so the plank cannot float upright. When it takes up the position as in Fig. 24, G is still on the waterline, B is ¼ inch below the waterline, and M is now over 10½ inches above B, so that the plank is stable — very "stiff," in fact. If a 4-inch-thick plank is chosen, it will be noticed that G and B are still in the same relative positions, but M has moved up a little, though not sufficiently to prevent the plank from capsizing, as in Fig. 25.

If the plank be square in section, it still capsizes and floats at rest in the position shown in Fig. 26.

If the plank is 8 inches deep by 9.8 inches wide, it will float at rest in a very wobbly fashion, with the longer side horizontal. Planks of various proportions have properties as shown in Fig. 27. It is not intended here to go into the question of stability at any length beyond remarking at this stage that specimen *f* requires very nearly three times the leverage to heel it a certain small inclination as does *d*.

It should be clear, then, that such a boat as specimen *f* can be very stiff in one position and yet not float upright at all when heeled through 90°. Conversely, if a model of proportions as shown in Fig. 22 be ballasted, it may still be very crank indeed when upright, but very stiff in comparison when pressed down to its beam ends.

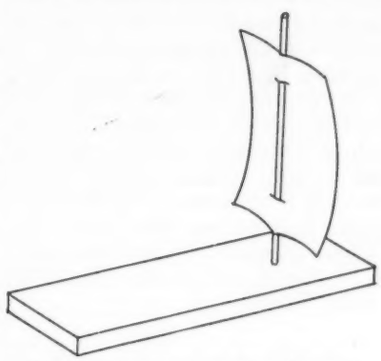


Fig. 21. Simplest form of model yacht

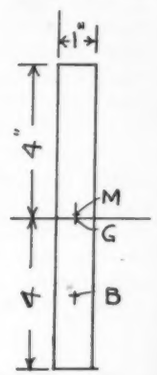


Fig. 22. An unstable plank

The question of the proportions become important, then, in the simple little model chosen for our example. Let proportions of 2 to 1 (beam to depth) be chosen quite arbitrarily. In its elementary form the model floats as in Fig. 28, and the first thing to be settled is how to dress it into shape externally.

Suppose the bottom be shaped as in Fig. 29 throughout its length so that it forms a prism in which all the transverse sections are the same throughout its length, i.e., no attempt being made to sharpen the ends. The model sinks lower into the water and floats as depicted, M, G and B being as indicated. It will be seen that B and G have been lifted in the wood, that G is slightly

Fig. 23. A stable floating body

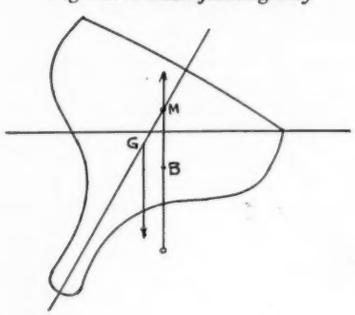


Fig. 24

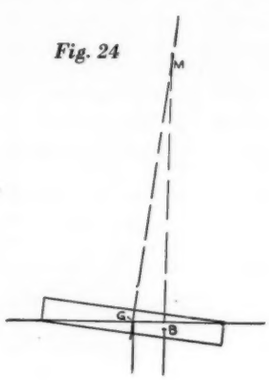


Fig. 25

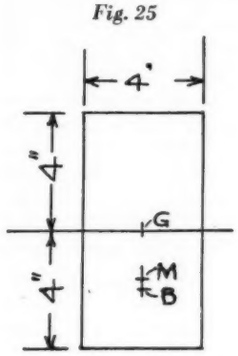
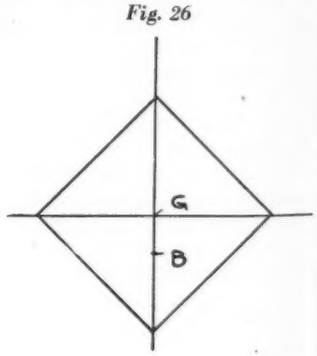


Fig. 26



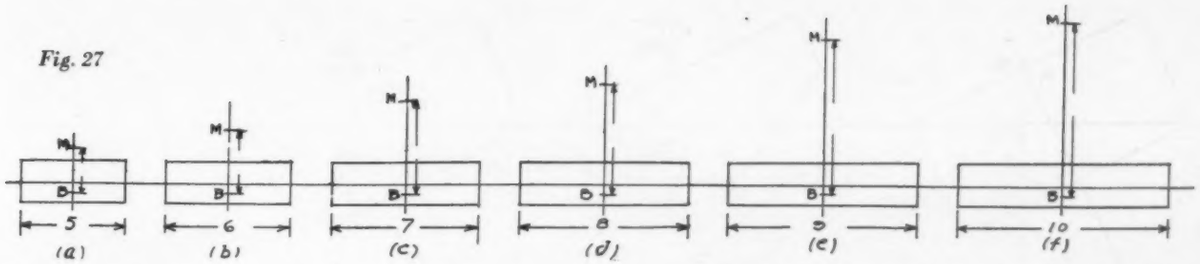


Fig. 27

lower relative to the new waterline, that *B* is higher than it previously was, and that *BM* has been increased to such an extent that, although the model is now lighter than it was before in the ratio of 3 to 4, it is actually nearly 24 percent stiffer than it was previously. In this connection it may be remarked that the underwater sections of the well-known schooner *America* were almost pure triangles amidships.

The flat plank as it heels over suffers no noticeable fall in the position of *M* until the "deck" enters the water,

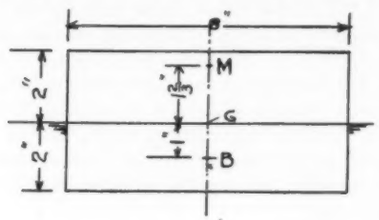


Fig. 28

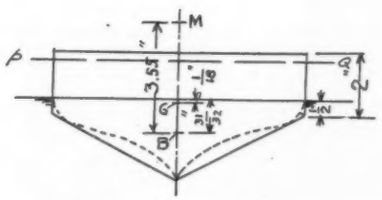


Fig. 29

when it falls very rapidly as the waterline plane decreases. Hulls with moderate proportions do not suffer such violent changes in this respect.

Can the model be stiffened still more by means of the chisel? Yes. The more the bottom is cut away, as indicated by the dotted lines, the stiffer she becomes.

So far, certain effects of chiseling the bottom have been considered, the hull still remaining solid. Can anything else be done to make the hull stiffer? Yes. Some of the tophamper can be removed and a slice (indicated as above *pq*) can be removed. This brings *B* up nearer to the waterline, decreases the immersed volume, (volumetric displacement) so that *M* is higher than ever and *G* is lowered, and there is an all-round improvement. How far, then, can the upper portion of the wood be removed? In the completed model it is undesirable that water should get on the deck over the lee rail when heeled at a healthy sailing angle of, say, 30° from the vertical. It means loss of stability and driving power, and the water bursting over the rail constitutes a drag on the speed. It may pour down the hatch, but at present our model has none.

The next move is to sharpen the ends for obvious reasons. But what is the effect of doing so? Some of the sections forward and aft then become so narrow in proportion to their depth that the middle of the boat, when she is heeled, may be stable and want to righten, while the ends forward and aft want to capsize.

What is to be done, then? Evidently, the ends cannot be left like a square-ended baulk of timber? It is necessary to cut away the forefoot forward and the deadwood aft, so that the ends of the model become of more stable proportions. At this stage never mind theories about wetted surface. Evidently, the model's stability must be weakened by cutting the ends into points, or more or less streamline entrances, but as a general rule it is advisable to keep the sections forward and aft as full as possible in carving the ends — certainly, it is better for them to be too full than too lean. Hollow entrances are to be avoided except in special cases and, as far as these articles are concerned, they should be avoided altogether.

What is the next thing to be done to improve the model? Hollow it out, making the hull as thin as possible. As a general rule this improves the model though it may spoil it as well. The general lightening sends *G* tumbling down below the waterline, as the bottom may weigh a considerable proportion of the two sides together. At the same time, the volume of displacement becomes small and *M* may go still further upward. But, on the other hand, two things have happened which have decreased the stiffness. The weight levering the boat upright is very much less and the boat floats so lightly and with such a small waterline plane that she may become unstable when upright. On heeling, however, she puts one side into the water, the waterline plane rapidly increases in breadth, up goes *M* and the model is stable — *not* in the upright position, but with a slight list to one side or the other.

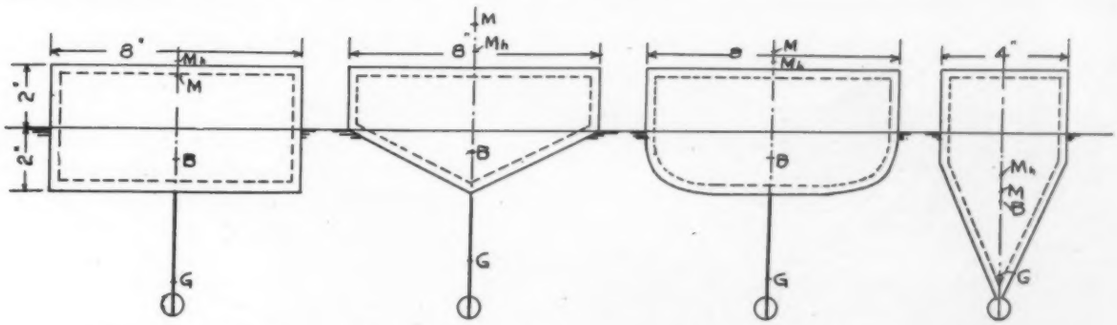


Fig. 30

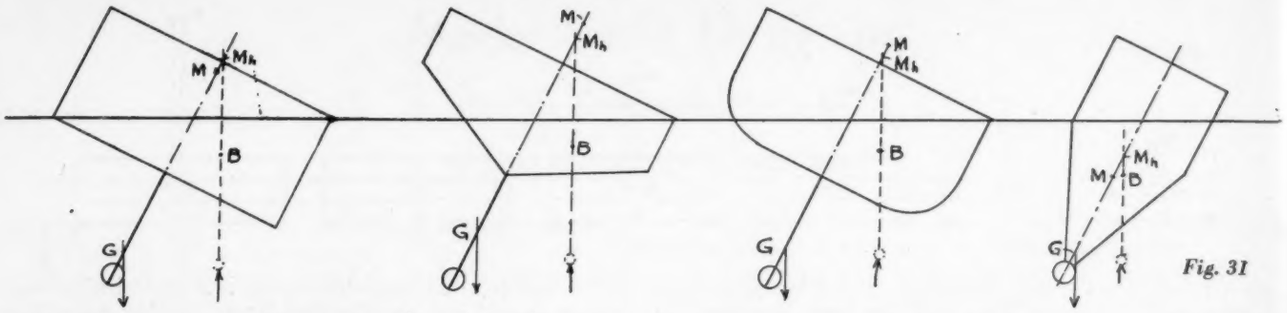


Fig. 31

Evidently the next thing to do is to ballast the model to bring *G* down still more so that she can carry sail; as is well known, external ballast is almost invariably used in the form of a lead keel.

It is hoped that the reader will realize from these elementary considerations how the French improved the speed of their frigates by sloping the sides of their underbodies inwards as they went downwards from the waterline, and also why the later British tea clippers were given a rise to their floors, in other words, slightly vee'ing their bottoms.

If a sailing ship be given proportions, say, 10 of beam to 8 of total depth, she may be perfectly stable with a little heavy ballast at the bottom of the hold, whereas, as she floats so lightly, she may have quite a topheavy appearance. On the other hand, she may be laden deeply in the water with a cargo of grain which fills her holds chock-a-block. She is not topheavy in the ordinary sense of the word, but she may be dangerously unstable if overladen, as the proportion of total beam to total depth is so much reduced. To guard against this, the well-known Plimsoll marks are put on the sides of all British ships.

Model yachts, as a rule, follow the general proportions of yachts as far as they are applicable. It is only natural that they should. British yachts emerged from fast merchantmen, fishing boats, smugglers, etc., and for many decades were taxed as regards dues for docking, moorings, wharfage, etc., in accordance with identical rules. In time, as beam was taxed and not draft, the main characteristic of British yachts became that of the "plank on edge," a type which, as can be seen from the diagrams, is of weak shape whilst upright, yet very powerful when heavily pressed. The Americans, untrammelled in these respects, and with different weather and water conditions, developed craft which were generally more of the light weather, flat bottomed centerboard type. When British yachts were released from the crippling effects of their measurement rules, and external ballast became general, the two types merged to a very large extent. Yet some model yachtsmen still prefer heavily ballasted models with plank on edge features, while others like the lightly ballasted skimming dish model. The former have a big weight at the end of a short lever to keep them upright and the latter a light weight at the end of a long lever. Each has its faults, the latter being very stiff while upright and yet so crank when on its beam ends that, in the case of some centerboard craft, it sometimes turns turtle and floats bottom upwards.

Each type is freakish in a sense, and the youngster will be advised to be moderate and design a model of such a shape that its metacenter does not move at all for considerable angles of heel, and stick to the simple elementary principles as briefly indicated, thereby forming a definite, constructive system of shaping the hull.

It has been shown that in the case of a solid wooden block a triangular section may be more powerful than a rectangular one of larger size with the boat of heavier weight, but it is unwise to generalize and take it for granted that this is always true. Model yachts are not solid blocks but heavily ballasted hulls of light construction. That the differences between hollow and solid models may be appreciated, let it be assumed that it is desired to cut a model from a block of pine 24 inches long by 8 inches wide by 4 inches thick.

Any number of different shapes may be cut, but consider only the four elementary shapes as in Fig. 30, in which neither the bows nor the sterns are sharpened or rounded — just boxes — hollowed out to a thickness of $\frac{1}{8}$ inch, and provided with decks of this thickness. For the sake of comparison, load each model down by concentrated ballast suspended by a stiff and light fin, which is so light that its weight may be neglected.

Let the four types be spoken of as box section, triangular or V section, elliptical bottom and peg top.

The main characteristics of the shapes can be estimated, if desired, by the rules already given — the wood in this case being taken as 36 pounds per cubic foot or 48 cubic inches to the pound. They are given in the following table: —

	Box	*V*	*Ellipse*	*Peg Top*
Displacement in lbs.	13.9	6.9	10.8	12.1
Weight of hulls (lbs.)	1.66	1.44	1.52	1.40
Ballast (lbs.)	12.24	5.46	9.28	10.70
Relative Stiffness upright	2.3	1.04	1.58	1
Relative Stiffness heeled	3.9	1.66	2.7	1

(*Continued on page 139*)

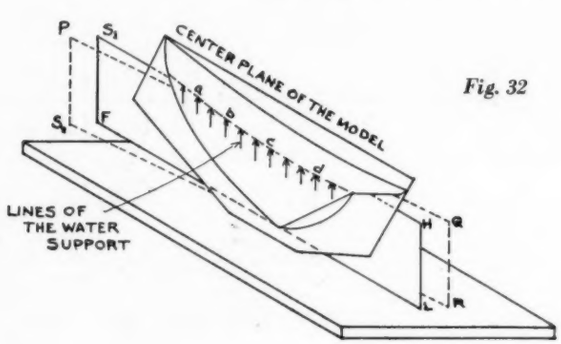


Fig. 32

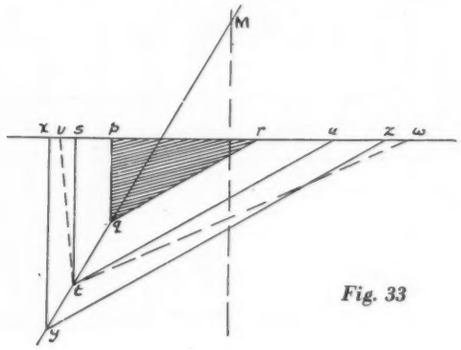


Fig. 33

Brown's Photo Service

A new twin-screw cruising commuter, 45 feet in length, designed and built by the Luders Marine Construction Co., Stamford. She attains a speed of 28 m.p.h. with two Sterling Petrel 6-cylinder motors

Of Interest To The Skipper

Floating Breakwaters

Walsh-Bugbee Company engineers have developed a floating breakwater which should be of special interest to yacht clubs and yacht owners desiring to secure smooth water off their property and prevent erosion of their beaches.

These breakwaters are built in a series of short sections to any required length. Each section is 30 feet long and 12 feet wide, and necessary for larger breakwaters in deeper and rougher water. The chop, or breaker, strikes the breast of the steel bulkhead and is forced to duck under, or splash over the top of the breakwater; in either case it spends its force and has no power left to do damage inshore. The breakwater is flexible and will give with the impact of the waves. Each 30-foot section weighs 36,500 pounds and is "loggy" in the water, like a heavily loaded vessel, or a floating iceberg.

A floating breakwater, as designed by the Walsh-Bugbee Co., which can be built to any required length

is constructed on sound engineering principles. The sections are coupled together like a train of cars and moored by a series of seven-pile dolphins. Each section is floated by two parallel extra heavy steel pontoons. The standard sections of the breakwater are designed to break seven-foot waves, such as prevail at times on Long Island Sound, although they may be built of still heavier material to cope with such conditions as prevail on the East Coast of Florida, or on the West Coast of California.

Between the pontoons of the standard sections a heavy steel bulkhead, thoroughly braced, is extended from its heavy steel frame to a depth of eight feet under the water, or to whatever depth that may be

New Toppan Llenroc Champions

A larger express cruiser of the Champion Llenroc type of hull is now in production at the plant of the Toppan Boat and Engine Co., Medford. This new model, while much more roomy due to its 42 feet of length and 11 feet 6 inches beam, has all of the characteristics of the smaller 32½-foot model. The photograph shows the new model powered with one 150 h.p. Sterling Petrel engine. An actual speed of nearly 20 m.p.h. was obtained. The new hull is designed for a maximum speed of 40 m.p.h. with installations of 500 h.p.

The Toppan Co. has developed a new method of using two engines in this hull, one of 100 h.p., giving a cruising speed of 13½ m.p.h., and also a slow and efficient trolling speed, and a larger engine of 200 to 400 h.p. for express cruiser speeds. Either engine may be operated singly or together for long periods at maximum efficiency.

The operator is protected in a large glass-enclosed driving cabin located well forward, giving an unobstructed view over the bow even at high speeds. Forward of this enclosed bow cockpit is an open cockpit. A main salon 14 by 10 feet amidships provides every comfort. Sleeping accommodations for six to seven are provided in the main and after cabins, and in addition quarters for one extra man are provided forward.

(*Continued on page 140*)

The new model Champion Llenroc express cruiser is a 42-footer

A TOAST TO THE SKIPPER

MARINE MOTIFS

Y-9 — A good looking new crystal service, suggesting a toast to the skipper, with the decorations carried out in marine blue.

Highball glasses	$18.00	the dozen
Old fashioned cocktail glasses	18.00	" "
Battery cocktail glasses	18.00	" "

THE RIDING LIGHT

Y-6 — A brilliant new crystal service, having the resemblance to a ship's lantern. There is a sturdy quality about this glass that recommends it for sea voyaging. The bands may be of any color you specify.

Goblets	$28.00 doz.	Whiskies	$22.00 doz.
Saucer champagnes	28.00 "	Sherbets	28.00 "
Wines	26.00 "	Fingerbowls	32.00 "
Iced Teas	25.00 "	Fingerbowl plates	36.00 "
Water tumblers	23.50 "		

The above prices include double flags or single flag and name of your yacht

RICHARD
Briggs INC

32 NEWBURY STREET
BOSTON MASS.

Summer Store
MAGNOLIA MASS.

About Those Motor Boats

(Continued from page 62)

solidity of the water before it reached us. We were buried in foam. I hung onto the wheel and came up without serious damage. The sudden stopping of the boat sent Orlin's face forward against the camshaft, and broke his jaw and separated him from a few teeth. But, as you know, he was driving with me a couple of weeks later in *Miss America VII*, with the same engines.

"It's going to be a great racing year."

\+ + +

This is not Gar Wood speaking, but your humble — or, rather, recently humbled — correspondent. My guess is that in the next Harmsworth race Gar Wood will have a new twin-screw boat equipped with two Packard motors fitted with superchargers — 3600 h.p., which is considerable lift for engines originally designed for 850 h.p. each. If competition looks particularly dangerous, the guess goes up still further — a 40-footer with four Packards, which will deliver approximately 6800 h.p.

\+ + +

Thumbing casually through the pages of Lloyd's Register — for about five hours — I found on the end of my thumb some amusing statistics concerning our men of wealth and the yachts they have had built in foreign ship yards. If all of the 171 foreign sail and motor craft from 27 to 408 feet long now owned by our social and financial geniuses were moored bow to stern in the Hudson River they would form a line 3.14 miles long, with no space between them.

It is impossible to figure the value of this marvelous armada of German, British, Norwegian, Chinese and Swedish — but mostly German — pleasure craft, because the prices and other emoluments paid, in many instances, are not open to the vulgar public gaze. But the sum is certainly somewhere between $50,000,000 and $100,000,000 — and would look very pretty on the books of our own boat builders, particularly at this time. It is, at least partially, a matter of patriotism versus pocketbooks, and, as usual in such cases, the pocketbook wins.

"Gamecock" and "Sunshine" Win Race

(Continued from page 56)

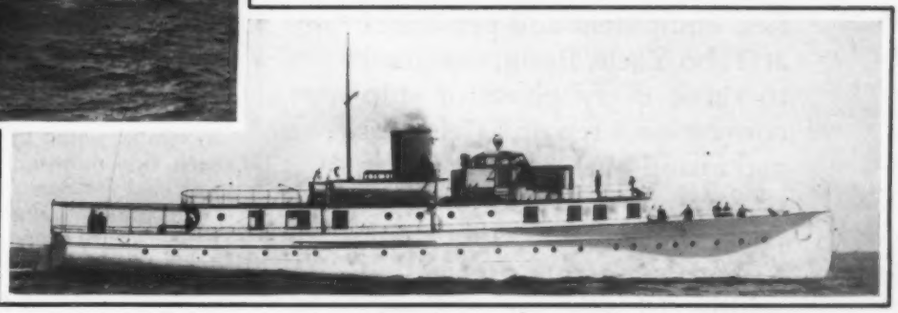
Scimitar III came in the next afternoon, reporting a trying passage, but with no word of the others. The Coast Guard went in search and aeroplanes stood ready to comb the Florida Keys for the two missing boats. However, *Cynosure* was taking good care of herself, hove-to in the Stream. But first she was caught on the lee shore forty miles east of Havana when seeking Matanzas Harbor, and it took some careful handling to claw her off into the face of the norther. She sailed back across the Stream and anchored in Key West. *Virginia* took shelter along the Florida coast and did not finish.

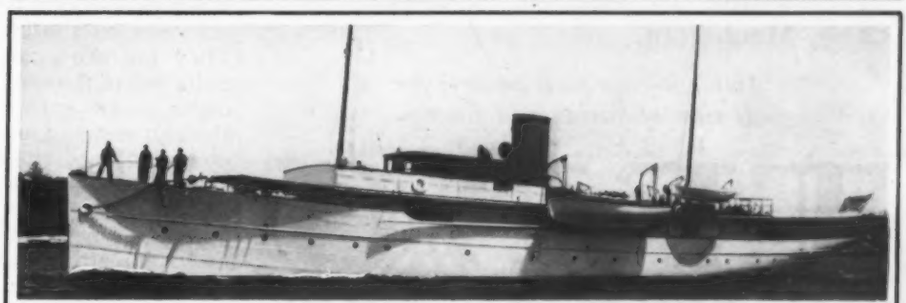
When Admiral Gandy reached Havana by steamer from Key West, where he left *Cynosure*, there was a banquet at the Yacht Club and there were many toasts to good boats, good crews and next year's race.

Yacht	*Rig*	*Owner*	*Elapsed Time*	*Corrected Time*
		Class A		
Sunshine	Schr.	H. S. Denniston	62:39:40	62:39:40
Windjammer	Schr.	G. H. Tullis	65:54:20	63:18:05
Virginia	Schr.	Dr. H. S. Walker	Did not finish	
		Class B		
Gamecock	Ketch	W. B. Allen	69:47:25	63:55:20
Haligonian	Schr.	Houston Wall	64:40:02	64:40:02
Marelen II	Yawl	L. L. McMasters	70:41:30	65:24:19
Scimitar III	Ketch	W. A. Hart	96:02:00	93:50:45
Cynosure	Ketch	Gidge Gandy	Did not finish	

....SAIL AND POWER YACHTS

Owner's launch built by HERRESHOFF in 1931 for the "Aloha."





HERRESHOFF 31 FOOTER

Fishers Island auxiliary sloop designed for cruising and racing.

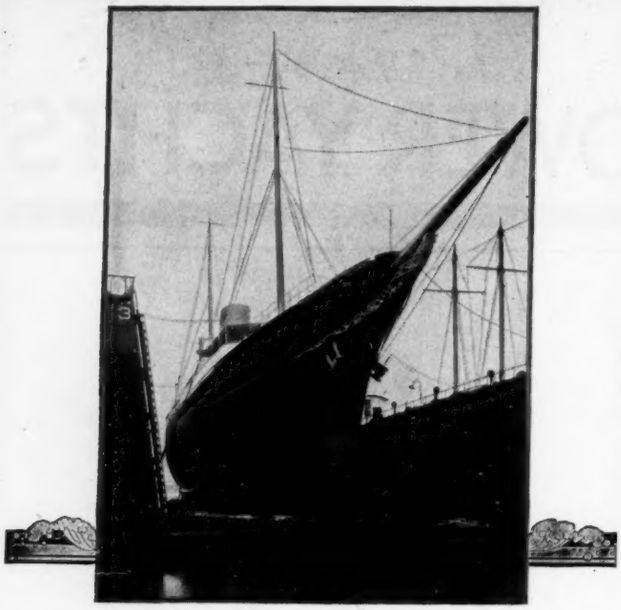
"VARA"

Built by HERRESHOFF—150-foot twin-screw Diesel motor yacht.

"ARA"

Designed and built by HERRESHOFF — 165-foot twin-screw Diesel motor yacht.

THE AMERICA'S CUP SINCE 1893



TEBO—*where a most distinguished clientele is served*

It is no unusual thing, during the overhaul and fitting out period, for thirty or forty fine yachting craft to be berthed at Tebo at one time.

Such is the wealth of facilities, equipment and personnel at Tebo Yacht Basin, designed to serve every phase of ship conversion, repair, overhaul and fitting-out, that possibility of delay in deliveries on contractual time is eliminated. Convenient owner supervision within 15 minutes of lower Manhattan.

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In Retrospect

(*Continued from page 91*)

and made a number of personal comments on him and his antecedents, there being little danger of his hearing me. The next watch had the job of getting in the royals, and outer jib, saving the topgallant sails, cro'jack and a reef in the mainsail for eight bells and all hands. When we finally got through with the job a good slice of our watch below was gone.

Discipline on the *Hawaiian Isles* was strict and the treatment not any better or any worse than on a great many other American ships. I am skeptical about so-called "hell ships," "bucko mates," etc., and firmly believe that a good sailorman was seldom, if ever, molested by those in authority. There were some bad ships of course, and hard and brutal captains and officers, but they were very much in the minority.

Seventy-two days out from Newcastle we made the Farallones, soon afterward picking up the pilot. Later, a Spreckels tug took hold of the ship and we towed in through the Golden Gate.

In the next couple of days the majority of the crew were paid off, leaving me, a Danish seaman, the boatswain and the officers to stay by the ship. One day, while still in the stream, two men came on board with tales of big wages to be made by going with the salmon fleet to Alaskan waters, and tried hard to get the young Dane and myself to go with them. The old boatswain, hovering about in the background, kept murmuring something about "There she blows," until I tumbled to what he meant. Anchored in the stream were several whaling vessels waiting to complete their crews, and I am sure that the salmon fleet would never have seen us had we made the move.

From the deck of the *Hawaiian Isles* I saw, one blustery March morning, the British full-rigged ship *Blairmore*, in ballast, anchored out on the Mission Flats, turn over in a squall and drown six men of her crew. We saw her capsize and roll over until only part of the side and bottom showed above water. The survivors could be seen standing or sitting on what looked like a big whale's back. The ship was raised a couple of years later, re-named the *Abby Palmer*, and later became the Alaska Packers' *Star of England*. A few days later I saw the old bark *Alexandra*, to which I said good-by in Australia, come up the bay in tow, and with tugs on each side pumping water into her hold. Loaded with soft coal for San Pedro, she had been on fire for some time, and found it more advantageous to make San Francisco. She was sunk at high water on the mud flats.

The illustrations in Mr. Ames' well-told story also show the difference I have mentioned in life at sea as it is now and as it used to be. One notes the Hollywood influence on the boy's ideas of what to wear at sea. They are shown stripped to the waist, evidently in imitation of the synthetic heroes of the films, because no other sailors ever dressed that way, except, possibly the gun crews in action on a warship. While there were plenty of hard characters at sea, their tough qualities showed up in other ways than by taking off their clothes when on deck in warm weather. Sea traditions among the real seamen have always been conservative, and I am sure that no man or boy appearing on deck half-clad in the old days would have been tolerated.

[Charles Robert Patterson, who writes the above article, is a well-known marine painter, whose work is well known to the readers of YACHTING through reproductions of several of his canvases which have appeared in color in the magazine. Mr. Patterson knows the sea and ships thoroughly, much of his early life being spent at sea in American and British deep-water ships, as the story herewith indicates. ED.]

ADVERTISING PAGES REMOVED

A Dead Ship Yard

(*Continued from page 86*)

Then commenced slow death. A sailing launch from another ship would come alongside and up the ladder would appear an ensign, followed by a "stripping" party consisting of a quartermaster, boatswain's mate, carpenter's mate and machinist's mate. With an all-knowing air, they would wander to the storerooms. They liked this; they liked that. And they took this and took that, — flags the chief quartermaster had made himself, and which were his pride, were tucked under the visiting quartermaster's arm or laid aside; spare parts of all kinds which the various petty officers had sweated to obtain went without even the formality of an auctioneer's hammer.

This state of affairs continued for three days. Good material and parts went, and in exchange appeared dirty ensigns, worn bridge matting, dirty awnings. All hell broke loose when one ship wanted to exchange wheel ropes — that was the last straw. Did she think we wanted to steer by hand to our final port? That enlisted man was informed he could simply simmer and boil the rest of his life on earth as far as we were concerned. But the worst was yet to come.

On Friday night, with the last liberty scheduled to begin early Saturday, signal was received that two ships were to make exchanges and pick many of our crew. That hurt. Weren't we to be permitted to die intact? Really, it was an extremely sensible thing to do; short-timers were exchanged for long-timers and we had little or no further use for torpedomen, gunner's mates, signalmen and some machinist's mates. But the crew did not like it. My prize machinist's mate came to me and said, with tears in his eyes, "Captain, I put this ship in commission and, Captain, sir, I want to put her out." He did. He probably should have been transferred, but he simply wasn't. He had been aboard almost ten years.

On the night before we sailed for Philadelphia a ship to which we had transferred twenty-odd men came alongside for our extra fuel. What they left us amounted to practically nothing. We were stripped. But the next morning, when we got underway, the chief quartermaster broke out a "Homeward Bound" pennant about fifty feet long. He had been up most of the night making it. It wasn't very regulation but it certainly was expressive. Homeward Bound!!

We made a fine passage to Philadelphia, at times making 26 knots under two boilers, with everything running like a Swiss watch. If we were going to die we might as well go out with a grand gesture. We made our last dock — with the aid of a tug for the first time in two years — much to the disgust of all hands, from myself to the newest ordinary seaman. Then we commenced to die by degrees — simply wither away.

At the Philadelphia Navy Yard there is a fresh water basin tucked away at one end of the yard. It is a Men of War Graveyard — all naval vessels on the East Coast are sent there to die. It might better be termed a seagoing graveyard. It actually has a musty odor of death pervading it. Ships were not intended to die that way. One sees, when going out of the yard to the city, a forest of masts and, below them, red hulls of destroyers and submarines, and dirty gray hulls of cruisers, repair ships. Even the *Olympia*, Admiral Dewey's flagship at Manila, is present, looking very dejected despite various explanatory signs which tell the civilian sightseer what a magnificent ship she was in her day. Death is present, and it is that ghoulish slow rotting away we read about of the trenches during the war. One who has served in these ships believes they deserve a decent burial. Yet in time of need these ships can be returned to active service. But I simply cannot help thinking of

KOHLER PLANTS GO TO PARIS!

Model "EP-36"—a 1½-K. W. Kohler Electric Plant designed for marine use.

"Mirage," owned by L. H. Dulles, Jr., of Paris

ABOVE is shown the "Mirage," property of L. H. Dulles, Jr., Paris, France. Another fine yacht added to the ocean-going fleet now equipped with Kohler Electric Plants!

Reputation for dependability has given Kohler Plants world-wide fame and acceptance. They are also known for economy of fuel consumption and low operation and up-keep costs. Even a very small yacht is not overcrowded by the addition of a small Kohler.

Kohler Electric Plants generate standard electric current at 110 or 220 volts A. C. or D. C. Capacities vary from 800 watts to 10 K. W. Current comes direct from the generator — or from dependable, but compact, rubber-cell type storage batteries, as in the new model D-32. Use them for general lighting, for operating electrical appliances, sump pumps, winches, fire pumps, cooking equipment and any other electrical apparatus on your yacht.

Send coupon for information specialized to marine and yachting requirements. Kohler Co. *Founded* 1873. Kohler, Wis. — *Shipping Point*, Sheboygan, Wis. — *Branches in principal cities.* . . . Manufacturers of Kohler Plumbing Fixtures.

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Gentlemen: Please send catalog describing Kohler Electric Plants.

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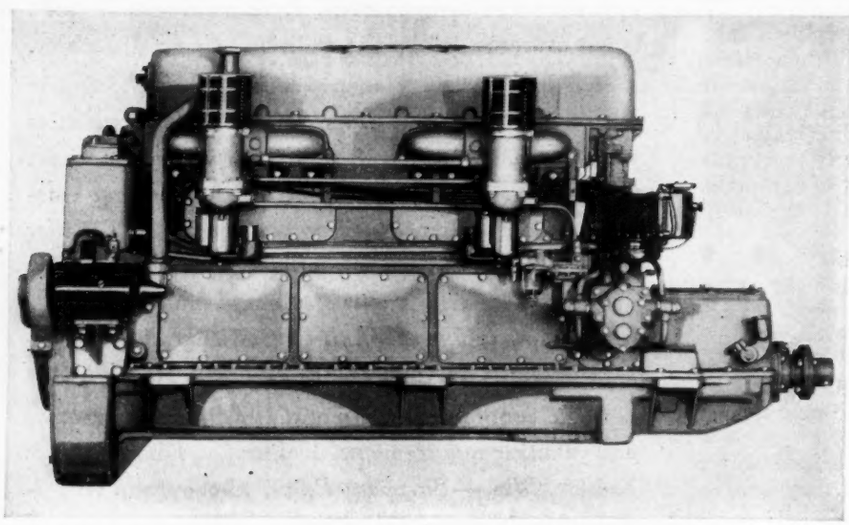
POWER for the

This fast Robinson Seagull 40-foot Speed Cruiser, owned by Mr. David McCullough of Palm Beach, won both the Palm Beach and Miami express cruiser classics—a fine tribute to the power of twin-screw Kermath Sea-Wolf engines.



Sea-Wolf 225 H. P. is a valve-in-head "six" engine ideally adapted to runabouts, commuters and cruisers. Available in true right and left hand opposite rotation for twin screw use.

KERMATH

Kermath powered boats — runabouts, commuters and cruisers — consistently prove their mettle in the heat of racing competition. Stamina, and the renowned attributes of power delivery built into Kermath marine engines are responsible for their sturdy ability to outlast and outperform.

Significantly, this sensational triumph of fine engineering design is duplicated every day of the yachting season in the routine enjoyment of trouble-free performance and willing power responsiveness so sought after by discerning yachtsmen.

The basis of this mechanical excellence may be found in the original designs of Kermath engines to successfully meet the arduous demands of the most exacting marine usage. Kermath offers you a greater degree of dependability, more power responsiveness, lasting qualities inherent with fine workmanship, and a 22-year record of unparalleled service.

For wheel data and specific information on engine models, speeds, etc., write

KERMATH MANUFACTURING CO.
5893 Commonwealth Avenue, Detroit, Mich.

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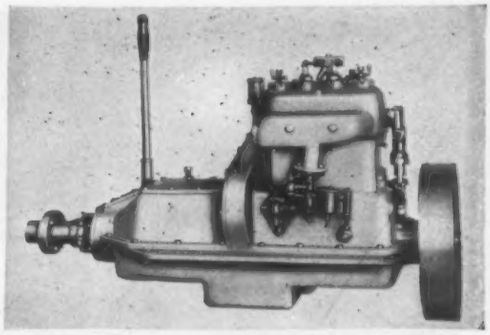
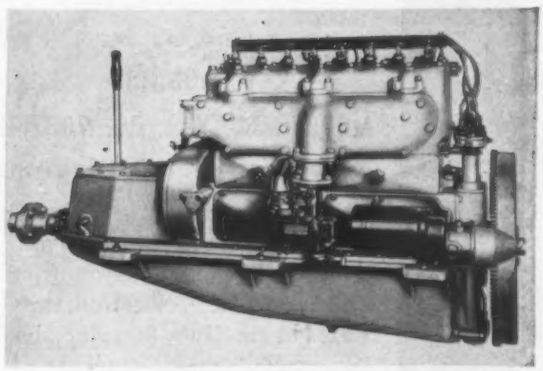
Outspoken Demands of Marine Usage . . . .

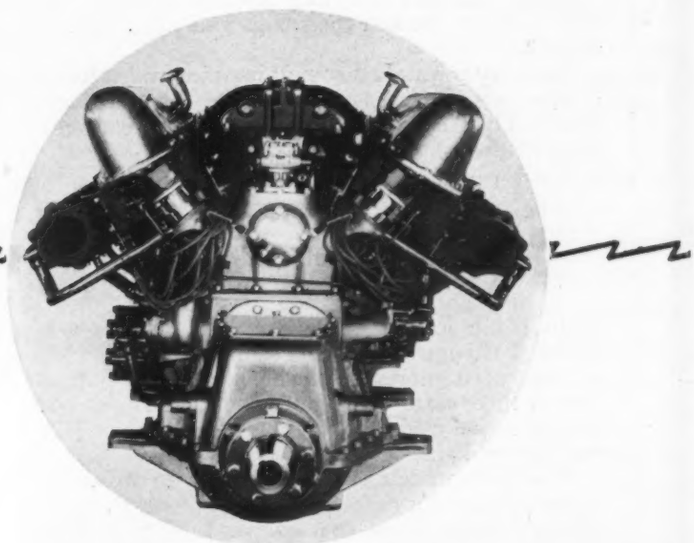
In Two, Four, Six and Twelve Cylinder Models



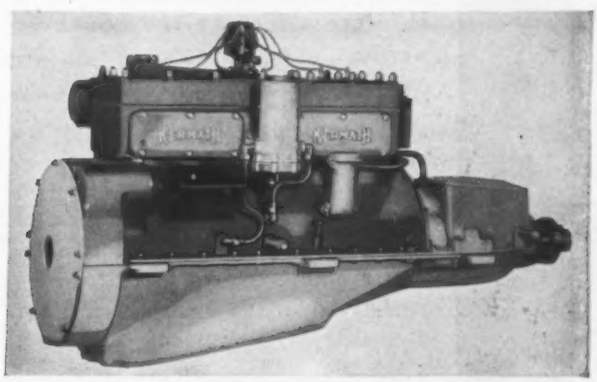
A full range of sizes in two-cylinder engines of proven performance for small launches, dorys, auxiliaries.



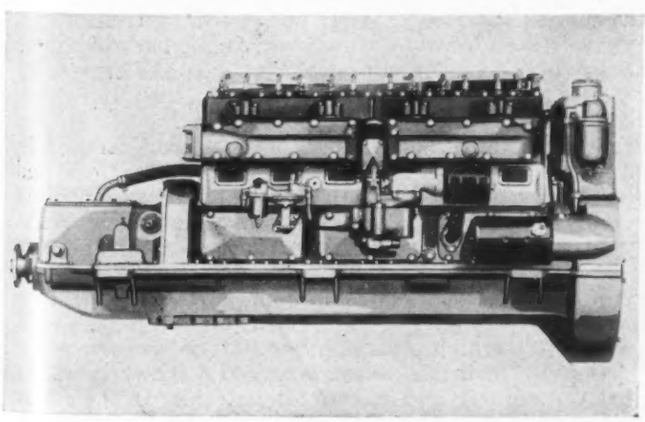
A powerful "four" ranging in horsepower from 35 to 50, for medium duty use in work boats, tugs, cruisers and auxiliaries.



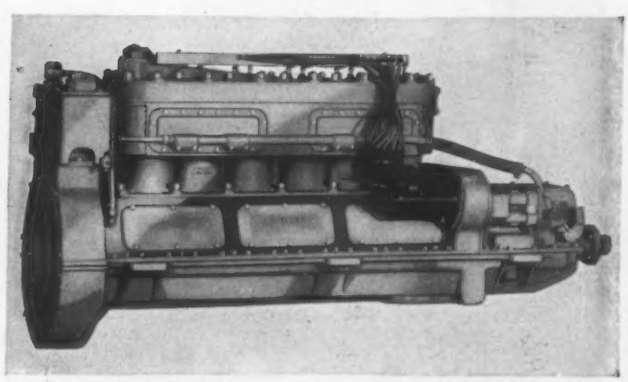
Sea-Raider 300 to 400 H. P. V-type twelve-cylinder engine is a custom-built engine of tremendous power delivery, extreme compactness and light weight for cruisers and commuters.



Sea-Master is a light, compact "six" with or without reduction gear, for small cruisers and runabouts demanding economical operation.



Sea-Captain 65-100 H. P. "six"—built to outlast the life of your boat. Time tested—an ideal unit for moderately large cruiser demands.



Sea-Farer 150 H. P. L-Head "six" is a husky cruiser motor developing maximum power delivery at usable engine speeds of 1000 to 2000 r. p. m.

30-foot Standard "Playmate"

This smart little Cruiser has a large, roomy cockpit, ample closet space, four good-sized beds, toilet room and complete galley. Choice of three engines. Speed 11 to 20 m.p.h.

Comfort
Dependability — Seaworthiness
***built* into every "Playmate"**

These three factors have made Wheeler "Playmates" the choice of men and women all over America, from the Atlantic to the Pacific, from the Great Lakes to the Gulf. Stepping aboard a "Playmate" means finding all the conveniences you demand in your own home; it means never-failing, reliable performance; and, above all, it means absolute safety in the roughest weather.

ORDER NOW
For Early Delivery

Your order now assures your being on the water at the first suggestion of warm weather. Your choice of twenty-one models: 22-foot, 27-foot (3 models), 30-foot (3 models), 34-foot (3 models), 37-foot (3 models), 40-foot (3 models), 49-foot (3 models), 56-foot and 62-foot. Prices from $2,250 to $37,500.

Write for fully illustrated Catalog "B"

WHEELER SHIPYARD

FOOT HARWAY AVENUE
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PHONE MAYFLOWER 9-7600

them as dead — and it was to this graveyard of the sea that we were bound.

Three long months passed in which we tore apart the very thing we had spent years keeping together. We laid ourselves up with the idea that on some future day we might be called into service again. The ever-present enemy, rust, must be prevented from getting an entering wedge. All machinery parts were broken down and covered with a rust preventative compound; all removable parts carried to the storehouse in the Navy Yard for preservation; the breech blocks removed and the torpedoes and ammunition turned in. All of which is quite proper and as it should be, but the feeling of desolation and disintegration which gradually seeps through every pore is indescribable.

The crew felt as though they were leading a high-bred thoroughbred to death. They, themselves, did not know which way to turn. "Where do we go from here?" and "What difference does it make?" It is a hard attitude with which to cope. As the various departments were decommissioned, officers and men left for other duties; the crew became smaller and smaller, until finally the day came when all necessary work was finished.

The representative of the Commandant of the Navy Yard appeared on board, accepted the custody of the ship; the captain, chief engineer and the few men remaining watched the flag and commission pennant hauled down, packed their bags and went their various ways.

They have watched something that was a living part of themselves — something alive — wither away to its death. They have laid up a ship in a dead shipyard. May it never happen to me again!

Artful Dodges

(*Continued from page 83*)

main cabin looked early one morning when I went below. I thought at first I was alone, but soon a couple of contented snores disillusioned me and I discovered two or three slumbering gentlemen, looking as beautiful as gentlemen usually do at that hour, reposing chastely in their built-in, curtained bunks.

The built-in bunk offers privacy to its owner and hides him and his defects and effects from the eyes of his shipmates and their visitors. With them, it is easy to keep a ship looking trim below, and a sense of order and tidiness below are essential to enjoyment when people are living in close quarters.

We have found on *Wander Bird* that mirrors, judiciously employed, are not only much appreciated but that they give a very pleasant illusion of even greater roominess than we have. If you're feeling cramped on your little ship see if a big mirror, on the back of a door or on a bulkhead, won't let you take deeper breaths.

The more I have seen of linoleum, cork and other common floorings at sea the more I have come to believe that bare planks, stained dark if one prefers, and oiled, or scrubbed white, are best for all purposes. Cork and linoleum look neat and are easily cleaned — superficially — but they are persistent retainers of dampness. What goes on under the surfacing is not nice — damp and heat and accrued dirt do their work, rotting the flooring, polluting the air. Your plain floor, garnished with rugs in port, is easily kept clean and is not slippery. Use it and save the high price of other materials.

Wander Bird this season acquired a shower bath. It has worked well and it merits description. In the galley we put a 30-gallon tank to which we brazed an ordinary inner tube valve and an air vent. Then we put in a big filler-pipe with an ordinary air gauge in its cap. Half-

Springtime

IS CHECK-UP TIME FOR YOUR BATTERY

Don't guess about the condition of your battery — make sure. Have it inspected by an Exide representative

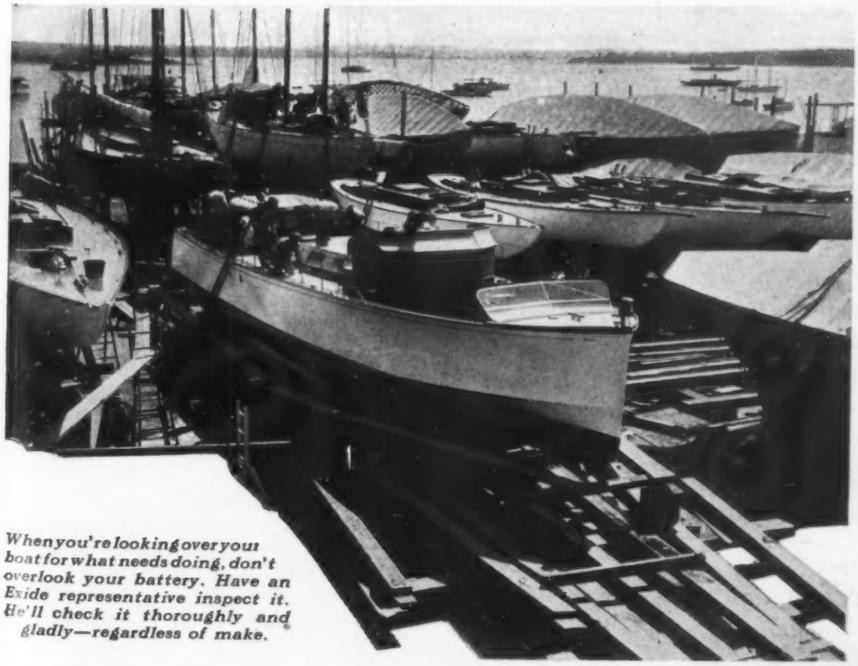
THE slap of the paint brush . . . the tap of the maul . . . are music to the yachtsman's ears. It's spring. Time to have your battery carefully checked over for the long summer season ahead.

There's an Exide representative in every important coast and inland port. The one nearest you will be glad to inspect your battery thoroughly. Take advantage of this service. It will avoid any possible battery inconvenience or trouble later.

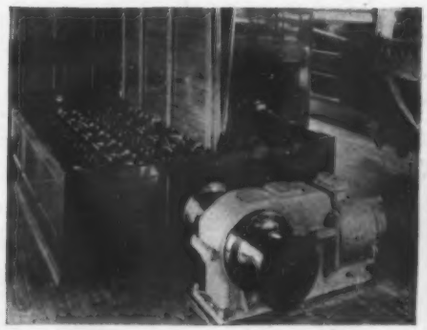
The absolute dependability of Exides is proved by the fact that of all yachts over 100 feet long, launched in 1930, more were equipped with Exide and Exide-Ironclad Batteries than with all other makes of batteries combined. Be guided by this preference of owners and designers who know Exide dependability.

Outboard and runabout owners: Remember that "When it's an Exide you start," in all kinds of weather. Aboard a yacht, large or small, the Exide-Ironclad Battery will provide dependable power for all electrical auxiliaries, in emergencies and during normal shutdown periods. Write for more detailed information. You need not feel obligated.

Exide
IRONCLAD MARINE BATTERIES



When you're looking over your boat for what needs doing, don't overlook your battery. Have an Exide representative inspect it. He'll check it thoroughly and gladly—regardless of make.



This typical Exide-Ironclad Marine Battery installation provides sufficient electric current at all times aboard modern pleasure craft—under normal conditions or in an emergency. You can have this protection, too.

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia

THE WORLD'S LARGEST MANUFACTURERS OF STORAGE BATTERIES FOR EVERY PURPOSE

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SAFETY AFLOAT
with
PYRENE MOTOR BOAT SYSTEMS

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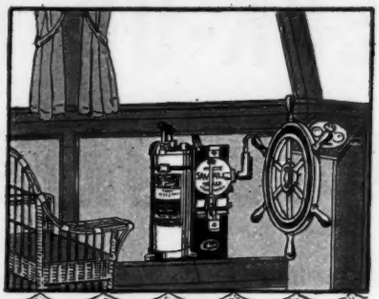
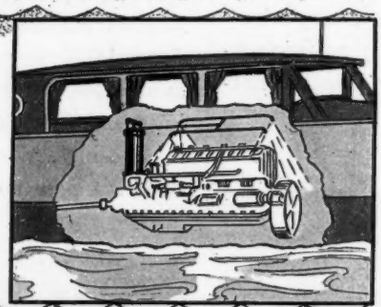
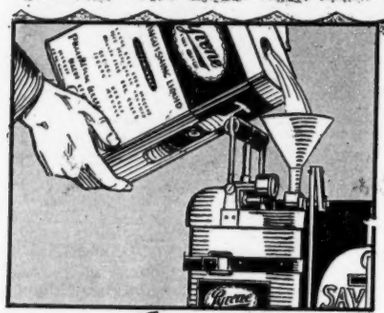
Easy Low-priced Installation—costs less than any other system, easily installed by any shipyard on any boat in a few hours time without interference with any other equipment.



Harmless, easily available recharges—obtainable in any port in the world. Will not damage motors or humans in any way.

Effective, fire smothering discharge—reduces fire damage to a minimum, and *positively eliminates any damage from the extinguishing agent*, as Pyrene Fire Extinguishing Liquid is *absolutely harmless.*





Immediate simple recharging—effected merely by pouring in a new supply of Pyrene Fire Extinguishing Liquid and pumping up air pressure to 100 lbs.

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Pyrene
FIRE EQUIPMENT FOR EVERY HAZARD

Pyrene Manufacturing Company
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inch galvanized pipe leads from the tank to the shower head and the two wash basins. When we want a shower we put hot or cold fresh or salt water in the tank, pump up fifteen pounds pressure with an ordinary automobile tire pump, and enjoy as fine a bath as can be had.

The bath itself, installed by a tinsmith in a day, is of sheet zinc, enamelled white, with a sheet lead tub — lead being used because it is easily shaped to the peculiar form necessitated by the curve of the bilge and because the seams can be made tight against the pressure of water and the weight of the bathers.

The amount of water used by each person can be regulated — an important feature if you are on a long trip. When not needed for its usual function, the shower makes an excellent oilskin locker.

No man is more important on a cruise than the cook. Give him everything he needs to do a trying job well. Give him, first, light. Without it the galley cannot be kept clean. Give him, too, as large a sink as you can get into the compartment, a deep sink which will hold water and dishes when the ship is on her ear. I think that a sink which has to be pumped out is more satisfactory than the ordinary one which empties by gravity. With a pump you empty your dishwater regardless of how far over the vessel is lying and you are never bothered by water surging into the ship when you are sailing hard.

Let me, finally, disparage the picturesque, romantic sou'wester and sing the praise of the lampooned yachting cap! In thick weather, rain or snow or fog, just when the sou'wester seems most ideal, it is in reality a dangerous thing to have around. It hampers vision to a grave extent, and far more serious, it deadens the hearing tremendously. A visored cap gives eyes protection from stinging spindrift without effectually cutting off the important visual field at the sides. It also leaves the ears entirely open to any sound, the thud of approaching screws, a faint whistle. If you doubt me make the test yourself when next at sea; note how the wind, whistling under the brim of a sou'wester, sets up little eddies and murmurs that literally deafen you to the highly significant sounds around you.

Water down your neck? Of course, you'll get water down your neck unless you have foresight enough to make yourself really comfortable with a bath towel around your throat before you come on deck! It's the simplest and most obvious of artful dodges, yet how very many have to be told about it!

Leather boots are infinitely more pleasant to wear than rubber ones. Leather footwear doesn't overheat the feet and "burn" them as rubber will after a day or so of continuous wear. The higher cost of leather is more than offset by its greater durability.

Making Clipper Ship History

(*Continued from page 79*)

Dawn revealed a smart vessel under a full press of sail close on the starboard quarter. "A' hae a feelin' she's the *Taeping*," exclaimed Keay to no one in particular, and the light of day proved her identity. It was to be a fighting finish.

All day the vessels kept fast company up the Channel, both spreading royal stunsails and kites. The Lizard was passed at 8:00 A.M.; Start Point at noon. The first dog watch brought in the Jamie Green, the second watch took the lashings from the ground tackle and the stoppers from the pipes, bringing the anchors on the bow. At midnight Beachy Head was abeam, five miles distant, and when Dungeness was on the bow both ships reduced sail and signaled for pilots. *Taeping* was coming

"Priscilla III" gets a new engine

Some facts of interest to those considering a power plant replacement

"Priscilla III" a 60-footer owned by O. H. Holland, of Miami Beach, Florida, has been equipped with a Chrysler Imperial 6-cylinder, 3⅝"x 5" marine engine with built-in 2.03 to 1 reduction gear, which lists at $1100. This engine, turning a 24" diameter by 16" pitch propeller 1400 R.P.M., gives a speed of 17 miles per hour.

Owners contemplating changing power plants write Amplex Manufacturing Company (Division of Chrysler Corporation) Detroit, Michigan, giving boat particulars and speed desired. With this information, we can tell you what Chrysler power will do in your boat.

Desirable dealer territory available for qualified representation

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Chrysler MARINE ENGINES

CHRYSLER MOTORS PRODUCT

How Fast?
How Far?
How Well?

A GLANCE at your National Log gives you the answers immediately. You have a constant check on your speed, your trip mileage, your total mileage—and your engine. Once you've used one, you'll never be without it, anymore than you'd run a car without a speedometer » » » It's a great help in navigating by chart and compass—a life saver in a fog » » » These fully tested, dependable gauges are rendering valuable service on large and small boats of all types, from cruisers to outboards » » » Passage through the water creates the pressure which is translated accurately into M. P. H. on the dial. There is no connection with motor power, nor towage of apparatus.

NATIONAL MARINE SPEEDOMETER
Outboard Model $18.50 each.

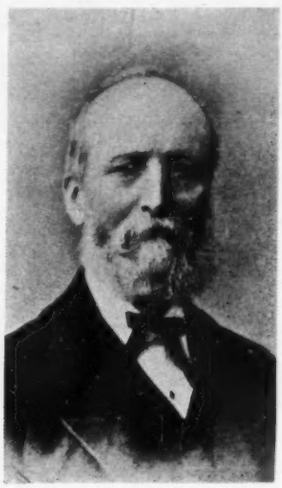
NATIONAL LOG
Model H or J for 35 or 60 M. P. H. $150.00 each.

Ask your dealer and if he has none on hand, write us direct and give us his name.

THE NATIONAL LOCK WASHER COMPANY
40 Hermon Street, Newark, N. J. 4265

up astern of *Ariel*, M'Kinnon showing no signs of heaving to, whereupon Keay bore up athwart her hawse to prevent his rival from getting the first pilot. M'Kinnon at once hove to while Keay laid *Ariel* between *Taeping* and the approaching pilot cutters. Once alongside, the pilot clambered over the rail and welcomed Captain Keay as the first of the China Fleet.

However, a reward of ten shillings per ton and one hundred pounds sterling went to the owners and captain respectively of the first ship to dock at London. Accordingly, both vessels immediately stood away for the South Foreland, *Ariel* slightly in the lead and M'Kinnon endeavoring to close up by sending aloft stunsails. Off



Capt. John Keay, of "Ariel"

Deal, both ships signaled for tugs. Keay, watching his rival, saw his lead wiped out when the first tug to arrive threw a line to *Taeping* and drew her smartly into the lead, walking her up to Gravesend an hour ahead of *Ariel*. Here the vessels had to await the tide together. Neck and neck, they started down the home stretch on the make of the tide, much as they had swung off together for Turnabout Island off the mouth of the Min River.

At 9:00 P.M. *Ariel* arrived outside the East India Dock Gates. Keay paced the deck in high wrath at the tides that prevented him from entering, while *Taeping* swept up the river and into the London Docks just twenty minutes ahead of *Ariel*. Both vessels were 99 days out from China.

It had been arranged that the first ship to dock would be acclaimed the winner. Accordingly, *Taeping* received the ten shilling bounty and Captain M'Kinnon the one hundred pounds. Like true sportsmen, both M'Kinnon and the owners divided this bounty with Keay and *Ariel*.

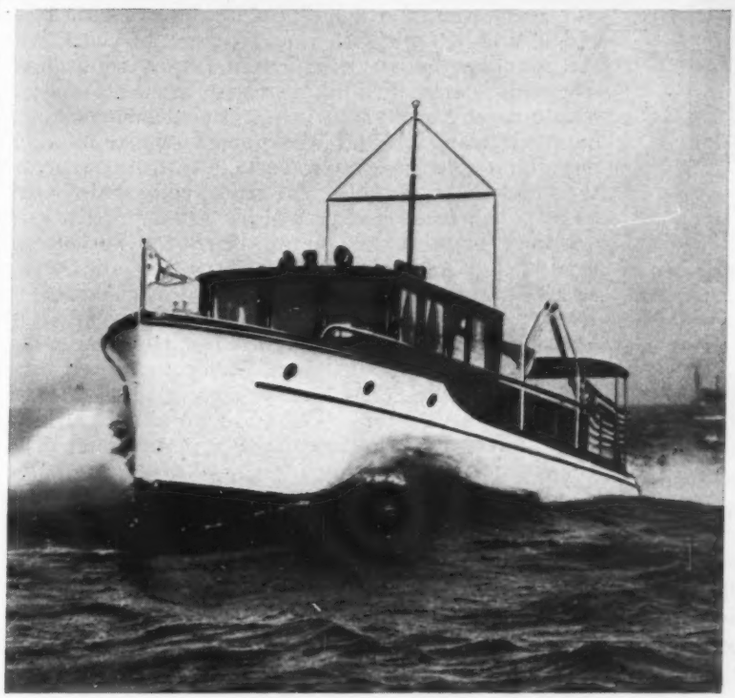
While the first chests of tea were being raised from the holds of the sea-weary racers, their captains came together with the owners in the shipping offices.

"Whaur hae ye been, Keay? A' didna' see ye on ony welcomin' committee an ye've kep' us waitin' aroun' fur twinty meenits," and M'Kinnon warmed to a broad smile.

Captain Keay stroked at his brine-encrusted beard and cast a glance at his battered beaver hat on the table. "Oh," said he, "we jist stapped to dae a wee bit o' fishin'. Let's see how this bunnet fits ye," and he turned over the relic of better days to the winning skipper.

M'Kinnon pulled Keay's beaver over his wind-blown, sandy mop of hair and winked with approval. "It's a dom guid thing," said he, "that we Scotties tak the same size bunnet."

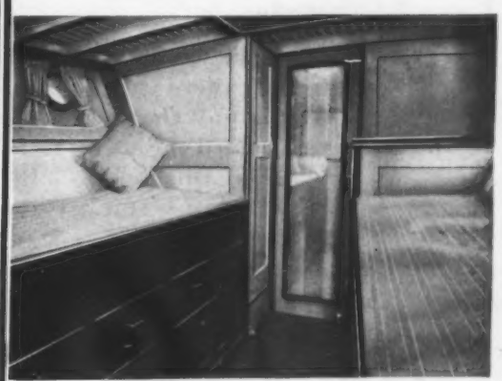
Unequalled for Sheer Merif



The bridge deck saloon of the Stephens *"43" with its centralized controls for owner-operation makes a congenial, spacious, well-lighted and sheltered gathering place for the owner's family or guests.*

The owner's stateroom, shown below, has two large beds, private lavatory, dresser, large mirror and full-length clothes locker. It is completely furnished with blankets, sheets, pillows, mattresses, drapes and floor covering.

At the bottom is shown the main or guests' cabin with sleeping accommodations for four people. It has a full-length clothes locker, drawers under berths, separate lavatory, full ventilation and companionway to aft lounging deck. This room is also completely furnished.



ONLY sheer merit could have won for the Stephens "43" twin-screw cruiser the popularity it enjoys among yachtsmen of mature experience. True, its price is lower than that of any other cruiser of comparable accomodations and power, but there is no other craft of its size which is an adequate standard for comparison in design, quality, workmanship and completeness of equipment. Let us explain in detail the superior advantages of the *Stephens* "43". Write today for particulars. Early delivery available on orders received now.

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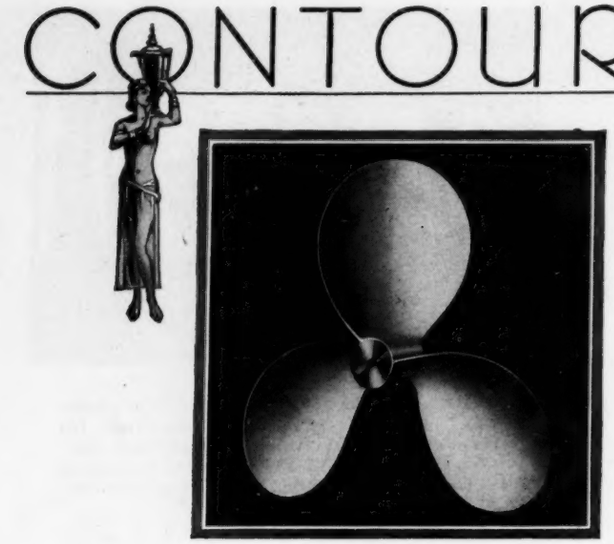
CONTOUR



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COLUMBIAN PROPELLERS

Sampling Superior

(Continued from page 74)

their broods of five or six among the reeds, their favorite ducklings sitting grandly on their backs while the others paddled furiously in mother's wake.

Had I the renaming of Quebec Harbor I would call it Port of Painted Stones. None of us had ever seen such coloring as was to be found in every gravel bar in the brooks and among the beach shingle. Perhaps it was the presence of so much copper ore, and perhaps not, but many of the stones were of most entrancing shades of blue or green, with vivid spots of red or white or cream, or veined patterns like network. Of course, as they dried they dulled; but they could be polished to brilliancy. One of the rocks in the harbor was named Agate Island, and it was littered with the chippings of years, where the islanders had overhauled and split thousands of stones in search of amethyst spar, rock crystals, and semi-opaque porphyry, silica and chalcedony. Another happy hunting ground was named Agate Bay. Lake Superior agates are often very beautiful, particularly the moss-agate, of white and green, commonly believed to be petrified moss of prehistoric age.

Sunny days made Quebec Harbor a perfect playground. Fog and rain ran them fifty-fifty and were not so good. In the gray of one evening the schooner yacht *Ranger* of Milwaukee came in under power; a Great Lakes cruiser, with long cabin trunk, three large boats, and a very long main boom. While we rowed around her the fog shut in so thick we could not see *Glencairn*, lying 200 yards astern. We had to work our course back by following a drifting row of picnic plates which marked the *Ranger's* evening meal.

The weekly steamer came in that night, to collect the tugs' gatherings of fish. How she picked up the island at all was a mystery. When she tried to get out she could not even find the range lights for the channel. She anchored within a hundred yards of them and waited for three hours until they showed up in a thinning.

It was thick most of next day, but on in the afternoon it cleared, and *Glencairn* spread her dewy wings for Sault Ste. Marie, 125 miles to the southward. Another fair-wind passage, bringing back Isle Parisienne, Whitefish Point, and the lowing herd of freighters all interested in the mouth of the St. Mary's River; and, finally, the well-buoyed channel and the stone-walled canal lock. And so to the desired haven, to await the owner's next spell of leisure, after 500 miles of frigid water had been parted by *Glencairn's* keel.

Analyzing the Bermuda Ocean Racing Rule

(Continued from page 99)

After having outlined the effect of the rule on sail area and rating of the three sail plans shown, I shall leave it to the individual yachtsman as to which rig he would adopt, as there has been considerable discussion and argument about the respective merits of each of these rigs.

The construction of this boat is in accordance with Lloyd's scantlings. The accommodation plan shows a double stateroom aft with separate entrance to toilet room; chart table and oilskin locker in the lobby. The large main cabin is arranged with transom berths and folding pullmans accommodating four. Forward, on portside, is a double stateroom with upper and lower berth, giving sleeping accommodations for eight in the owner's party. To starboard of the double stateroom is another toilet room. The galley is equipped with a four-hole Shipmate stove, built-in coffee urn, large ice chest,

ZEST that makes hearts beat faster!

Consider a few of the many performance features enjoyed by most all Johnson Sea-Horse Motors—advantages that thrill hearts both old and young!

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Johnson Sea-Horse prices range from $115 for the 1½ hp. "Single" up to $395 for the electrically started 32 hp. Sea-Horse "32."

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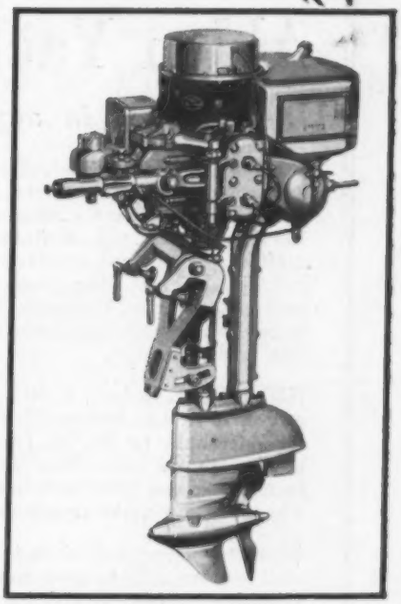

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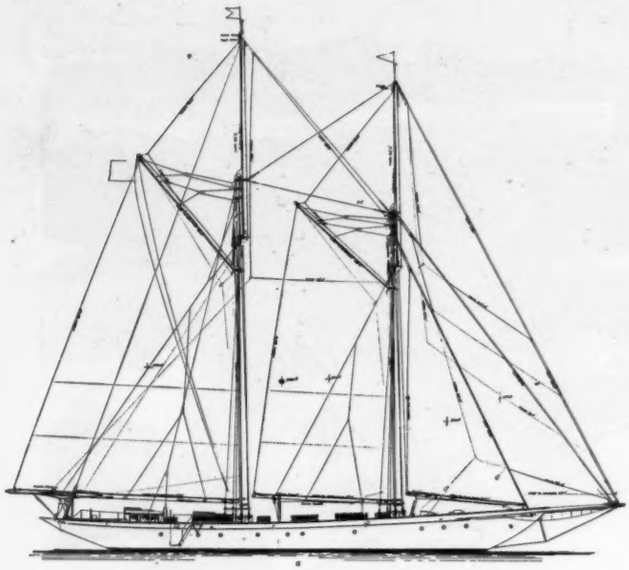

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THE PURITAN (*above*). Edward H. Brown, owner. Building from our plans by the Electric Boat Co., Groton, Conn. 103 ft. o.a., 75 ft. w.l., 23-ft. beam, 9-ft. draft. Diesel powered. Steel construction to Lloyds Highest Class. Note the semi-sunken deck house. We believe this is the largest sailing yacht now under construction in this country.

HIGH TIDE (*below*). J. Rulon Miller, owner. 70 ft. o.a., fast auxiliary cruising schooner built by M. M. Davis, Solomon's Island, Md. The first to be launched of our 1931 fleet, over fifty of which are now under construction.

With our large and skilled designing staff we are able to give most careful attention to our clients' requirements both in power and sail.

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Naval Architect *Yacht Broker*

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sink, coal bin and all necessary appurtenances. Forward of this is a forecastle with full headroom, with accommodations for the paid hands, with ample lockers, folding basin and toilet.

A 4-cylinder 3½″ by 6″ Hill-Diesel engine is installed in the passage, being entirely enclosed with gas tight trunk leading up to the skylight above. Provisions also are made for getting at all necessary working parts of the engine. Current for all electric lights and auxiliaries is supplied by the main engine, which is equipped with a 1-K.W. generator and necessary storage batteries. A large amount of storage and hanging space has been provided, as well as an unusually large lazarette for the storage of sails and other gear. Provision has been made to carry 350 gallons of fresh water below the cabin floor, and also 130 gallons of fuel oil.

\+ + +

[Ever since the Bermuda Ocean Racing Rule was formulated, in 1928, a number of boats have been designed to it with the evident intent of getting the most favorable rating possible under the formula. This has resulted, in some instances, in chopped off or abbreviated sterns, so that the belief is prevalent that to rate well under this rule a boat must have an abnormally short after overhang. Those responsible for the rule have contended that this is not a necessary result of the formula, and that a boat with balanced, normal ends could be turned out that would rate favorably, be good looking, and equally as fast as those designed to get the longest water line possible, irrespective of other considerations.

The design shown herewith, prepared by Henry Gruber, of the firm of Cox & Stevens, seems to bear out this contention. As a matter of comparison with an existing boat, the design here shown is of practically identical dimensions with those of the fast *Mistress*, designed last year, has the same sail area within 50 square feet, yet she rates a foot less (47.56 rating to 48.56 for *Mistress*) and has a more normal stern. Whether she will be as fast as *Mistress* no one can say at present, but a study of her lines (which are not published) indicates that she should be very smart under ocean racing conditions. At any rate, her longer after overhang does not adversely affect her rating, and with the three rigs shown she makes a very interesting study. Ed.]

Vale "Ingomar"

(*Continued from page 64*)

knots. It became evident that if they held on *Ingomar* would ram *Meteor* square amidships and very likely drown the Kaiser.

"Mr. Smith. Rule?" yelled Charley Barr, who was at *Ingomar's* wheel and who knew the rule perfectly well.

"*Ingomar* right!" snapped the Major.

"Mr. Robinson," called Barr to Charles Robinson, who was Commodore Plant's "yachting representative," as the major puts it. "What am I to do?"

"Hold on," ordered Robinson.

"By God, Charley, you're the boy," chimed in Commodore Plant, who all this time was sitting peacefully in the companion. "I'll give way to no man."

So on they held, until Baron Von Kotwitz, a German naval officer who was aboard as pilot, gasped and goggled at the madness of these Americans who seemed bent on slaughtering his All-Highest.

Just as they braced themselves for the crash *Meteor's* helm was jammed down. At the same instant Barr rolled his own wheel down. *Ingomar's* quickness on the helm saved the day, for the two great schooners shot up into the wind side by side and scarcely a foot apart, then paid off on opposite tacks. The imperturbable Mr. Robinson ordered a protest flag set in *Ingomar's* rigging.

"Fancy catching an emperor on the wrong tack," mused Mr. Plant. "You know. I don't like that protest

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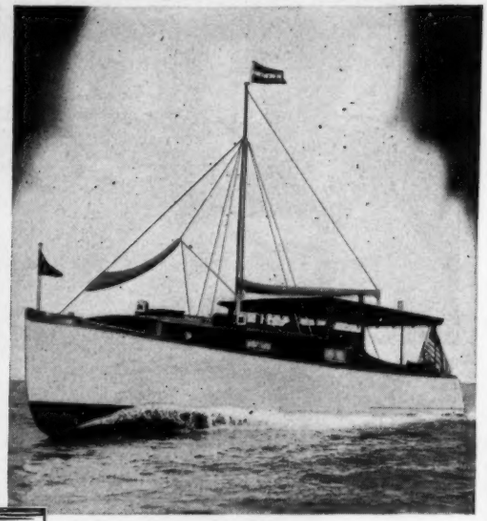
"NEDEVA" at "El Mirasol," the estate of E. T. Stotesbury, Esq., at Palm Beach, Florida



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flag. There's only one thing for us to do, and that's to go below and open a bottle."

A guest aboard *Meteor*, a British yachtsman who knew his rules, advised the Kaiser that his skipper had been at fault. Immediately the Kaiser ordered *Meteor* withdrawn from the race, and when *Ingomar* dropped anchor in Kiel after the finish, a launch came alongside with an admiral (of whom, says the Major, there seemed to be thousands at Kiel) bearing His Majesty's apology.

Apropos of admirals, one of the Major's most delectable anecdotes of *Ingomar's* cruise is that of the German admiral of mighty girth who came aboard to spend the night (with no baggage whatever) and mistook a shadow at the float for *Ingomar's* dinghy, with the usual results.

While they lay in Lubeck River shortly after the Kiel races, the Kaiser came aboard to inspect *Ingomar* in person, and to split a bottle or two of champagne with her afterguard while he expressed his admiration of the vessel. The Yankee schooner's afterguard were greatly impressed with the Kaiser's sportsmanship, wide knowledge, keen intelligence and pleasing personality.

It was about this time that the Kaiser offered his Gold Cup for the Transatlantic race of the following year. Apropos of that cup, howls of rage, wrath and disappointment were raised here when, during the war, it was melted down and found to be practically all lead. But Fred Hoyt, who was with Commodore Wilson Marshall in *Atlantic* when she won it, says that her afterguard knew half an hour after they had received it that the "gold" cup was just so many potential codfish sinkers.

There is surprisingly little racing in *Ingomar's* record after her successful campaign abroad in 1904. Mr. Plant brought her home and raced her during 1907, but in the Glen Cove races of that year she met her match in the schooner *Queen*, which had been built for the late J. Rogers Maxwell while *Ingomar* was abroad. *Ingomar* won the Navy Alumni Cup for schooners on the Vineyard-Newport run that year, but most of the time she ran a consistent second to *Queen*.

In the following year *Ingomar* was sold to Daniel R. Hanna, of New York and Cleveland, son of the famous Mark Hanna, and never again does her name appear in the New York Yacht Club's racing records. Mr. Hanna kept her for eleven years, and cruised extensively in her. The war was on by then, and the price of lead was sky-high. With many another fine old yacht, *Ingomar* fell a victim to the popular urge to place all available lead within the ranks of the German army, and it is probable that though she never went back to Germany herself part of her keel did. Stripped of her lead and most of her other gear, she lay, a hulk, in the vicinity of New York for years. From 1919 to 1923 Lloyd's shows her as the property of Henry W. Howe, of Milton Point, N. Y. In the latter years she is listed as owned by J. A. Nickelson, of New York, but she was not put in commission, for when Spencer Borden, of Fall River, Mass., bought her in 1925 she was still out of commission.

Mr. Borden used her as a houseboat at first, and when the yachts came sailing into Mattapoisett Harbor for the next few summers they found *Ingomar* at moorings there, unrigged and inert, but at least no longer neglected. From the first, the Bordens planned to rehabilitate the old schooner, and in 1928, with a Diesel motor and a new rig, she got underway from her old home port of Bristol and headed south for Nassau. The new rig was a moderate one, bald-headed, with a Marconi mainsail, and her mainmast spliced out only a little taller than it had been without the topmast when she was racing. Still, she could roll off the knots in a breeze, and her hull was as sound as ever.

Mr. Borden cruised in her for a year or so and in 1929 she remained tied up in Kilburn's basin until Albert

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RICHARDSON CRUISABOUTS

L. Hoffman, who was to be her last owner, bought her the following spring, 1930.

Mr. Hoffman found her hull perfect, her interior less so, and set to work gradually to put her in condition below as well as aloft.

Last autumn Mr. Hoffman took *Ingomar* to the Chesapeake, and at Oxford, Md., much more work was done towards putting her in shape for a winter cruise to southern ports, which was to have been followed by a trip across the Atlantic and a cruise in European waters, following her old racing track. But it was not to be.

With nine men aboard, under Captain Leif Sparre, *Ingomar* sailed from Oxford on February 18th, bound for Charleston, S. C., to pick up Mr. Hoffman and a party. Fog delayed her inside the Capes, but she passed Cape Henry bell buoy at 4.00 P.M. on the nineteenth and headed down the coast under sail and power. On the evening of the twentieth, with a moderate N.N.W. breeze, she was logging nine or ten knots when the skipper went below, leaving the mate in charge. At 11:20 that night the mate picked up two lights which he believed to be the lightship and gas buoy on the Frying Pan, and the course was presently altered. As it turned out, the lightship had been moved offshore since *Ingomar's* charts were printed and one of the lights they saw was the lighthouse on Cape Fear.

At 12:10 A.M. *Ingomar* struck hard on the tail of the Frying Pan, slid over into deep water, and then, with a heavy sea driving her, went on again and began to pound. For six hours the seas lifted and pounded her on the shoal and washed her decks, smashing in her skylights and hatches and gradually beginning to fill her. Soon there was enough water below to set the heavy cabin furniture adrift, and as she rolled and pounded, the furniture smashed the bulkheads out of her until she was one seething, open room from stem to stern, with wreckage batting about so that no man dared go below decks, though it was scarcely less perilous on topside as the seas washed her. This loose debris, the captain believes, broke off some of her plumbing or other openings through the hull and hastened her filling.

Despite the hammering, the old ship refused to break up and at six o'clock in the morning she had washed clean over the shoal and was afloat in the deeper water to leeward. They anchored, but with the motor pump out of commission, the water gained two inches an hour despite desperate work with hand pumps and buckets, and at 10.00 A.M. they made sail again and headed for where they supposed the lightship to be, hoping that if they reached her she could signal help to them.

Failing to sight the ship as expected, and with *Ingomar* settling under them, they finally headed her for the beach, but by then she was almost unmanageable and settling faster than ever, with her smashed portholes now awash. At 4:30 they launched the lifeboat.

By great good fortune Mr. Hoffman had equipped *Ingomar* with a big, new, steel, motor lifeboat which he intended to use for fishing when he got south. The motor was soaked and useless, and they hove it overboard to lighten her and bent to their oars. The schooner sank a few minutes after they left her, in the deep water to the southward of the Frying Pan, and there she will lie as long as the steel lasts.

Twenty-two hours of rowing brought the shipwrecked crew to the beach at Cape Fear where the Coast Guard station took them in. The keeper of Cape Fear Light had reported seeing flares that Captain Sparre sent up after the wreck, but had misjudged their distance offshore so that two Coast Guard boats that had set out to investigate had gone only as far as the slue and failed to see her. Had they found her in time and towed her to shelter, *Ingomar* might still have made that trip abroad this summer.

Model Yacht Designing

(*Continued from page 112*)

The relative positions of M, B and G are shown in Figs. 30 and 31. It will be noticed at once that the tables have been turned on the triangular sections, the full bodies allowing of greatly increased amounts of ballast and greater stiffness.

It will be realized, too, that in the V section with light displacement the weight of the hull becomes a more important factor, as it takes away more than a quarter of the amount of ballast, whereas in the box hull it robs the boat of only one-seventh. On the contrary, the weight of hull is of less importance in the heavy, pudgy models. Any remarks which apply to the weight of the hull apply with even greater force to masts and spars.

The effect of sharpening the ends is to lower the position of M because of the reduction in the breadth of the load water plane at the ends. At the same time the displacement is reduced, and the effect of this reduction is to raise the position of M. It has been seen that it is as well to clear away the deadwood, and the effect of this is to raise the position of B at the ends. The net result is that the sharpening of the ends has no marked effect on the position of M — it may be lifted or lowered a little according to circumstances. In this connection, it may be remarked that the position of B is not very far, as regards its vertical position, from the center of the midship section, being generally a little above it. This gives the designer a valuable starting point as he commences his design.

The sharpening of the ends reduces the displacement considerably and, consequently, the stiffness. The proportion of the final weight of the model, after sharpening, to that before sharpening the ends, is termed the prismatic coefficient. It may range from 40 to 60 percent, and it is a handy assistant if used with discretion, but the reader is advised not to attribute any special virtues to any particular value of it.

Now the shaping of the ends, in the opinion of the writer, is a matter of first importance in regard to the balance of the model. Yet he realizes that the shaping of the end sections around the lines indicated by the imaginary plumb-bob has been disputed and that the notion of the model resting on the edge of a moving shelf is regarded as fantastic.

A study of Fig. 31 shows that the shelf has moved bodily to leeward but, as in these prisms all the sections are alike, the direction in which the shelf lies is truly parallel with the original center line of the boat and the model does not alter course in the process of heeling.

Study for a moment Fig. 32, in which the model is balanced in a rather precarious fashion on the shelf, which is cut along $a\ b\ c\ d$ so that it represents the lines of support under the bottom of the model. As the model heels, the shelf $S^1\ H\ L\ F$ moves to the right and the water allows the shape $a\ b\ c\ d$ to alter accordingly and accommodate itself to the form of the underbody of the model. If, however, the form is such that the new line of support as represented by $a\ b\ c\ d$ lies along a new shelf altogether, such as $P\ Q\ R\ S^2$, then the model is wrenched in the direction $P\ Q$ by the combined action of the lead keel and sails *during the process of heeling.*

If the shape of the bow is too fine, or the quarters are too full a may move to the left and d to the right and the model will gripe. If the bow is too full and the quarters too fine, she will pay off the wind during the process of heeling. The change of direction during the process of heeling has nothing to do with CE's or CLR's; and shifting the jib or setting a larger or smaller one will make no difference.

In Fig. 31 it will be seen that the position of the upright metacenter gives no indication of where the shelf is likely to be after heeling, and it is desirable to know this in advance. Models have been designed by the author in which the ends are slightly out of balance and also others, generally similar, with the ends in balance; the difference in the ease with which each can be handled is very striking, the former being fidgety and the latter most docile and well behaved when sailing.

The balancing of the end sections can be carried out in several ways when the imaginary plumb line is known. Full sections or "V" sections or other shapes can be employed. Consider Fig. 33 for a moment.

A section sketched in as $p\ q\ r$ evidently cannot balance — neither does $s\ t\ u$, nor $x\ y\ z$. What is to be done? To retain sections of this type, M must be shifted to the left when $s\ t\ u$ begins to become a practical proposition, remembering that a slight decrease in beam brings M tumbling down rapidly, or, in other words, the plumb line moves to the left. This may be undesirable, and in this case the bows may be flared to $v\ t\ w$ or beyond, which will make the necessary adjustment.

Or it may be desired to use full round sections in the ends in order to balance them; and it should be realized that there is nothing in this method of balancing which makes the designer a slave to either sharp ends or round ends, long overhangs or short. These are determined by the desired length of the boat; and this will be discussed at a later stage. In practice, however, it will be found desirable, in order not to be at the mercy of the shifting shelf, to place it under control and keep it there by shaping the sections so that it can be nowhere else but where the designer wishes. This is done most readily by shaping the ends so that they balance around the plumb line dropped from the upright metacenter, *thereby making the upright and heeled metacenters coincide.*

(*To be continued*)

A.C.F.

A. C. F. motor cruisers are sold by the following distributors:

A.C.F.

Albany, New York	L. R. Mack, Inc.
East of Amityville, L. I.	Harold's Yacht Basin
Babylon, Long Island	Wayne Frost
Boston, Mass.	Atlantic Radio and Marine Co.
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Cincinnati, Ohio	Ohio River Motor Boat Co.
Cleveland, Ohio	N. J. Shea
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Newark, New Jersey	Griggs Sales Company
Newport News, Virginia	C. P. Amory
New York, 217 W. 57th St.	A. C. F. Marine Salon
Philadelphia, Pa.	Harris, LeRoy & Clark
San Francisco, Calif.	John G. Rapp Corporation
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7 x 50 BINOCULARS
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Don't overlook the advantages of the New Bausch & Lomb 7x50 Marine Glass as a part of your navigation equipment. Designed especially for marine use. One-piece body construction and special prism mounting. Seven times magnification with great 50-millimeter objective lenses, providing exceptional illumination even under adverse weather conditions.

Enables you to be at the center of activity and enjoy close-ups of events that you might otherwise miss.

Other models for general use, ranging from 6 to 10 power, $53 to $100, at the better optical and sporting goods stores. A comprehensive explanatory catalog, "Roving Eyes," is mailed at the request of those sincerely interested in as fine a binocular as can be made.

BAUSCH & LOMB OPTICAL CO.
722 St. Paul Street, Rochester, N. Y.

Of Interest to the Skipper

(*Continued from page 113*)

This company has also in production a new Llenroc hull 28 feet in length at a price which will make it possible for the man of moderate means to own a duplicate of this Champion design. The standard 32½-foot hull is now available with a Vee engine drive, and, with the engine aft, the interior and exterior design is similar to the 42-foot hull.

For those desiring a small and low priced cruiser of seagoing ability, where speed is not essential, the Toppan Co. has a new 18-foot dory cruiser sleeping two. This little sea boat sells for less than $800, including an 8 h.p. engine.

Wamsutta Sea-Fast Colored Duck

Sea-fast Wamsutta duck in eight distinctive shades has recently been placed on the market by the Wamsutta Mills, of New Bedford. Not only does the dye make a colorful material, but it increases the life of the duck due to protective properties in the dye. Years have been spent in securing a dye that would be unaffected by sea water and sun. Now Wamsutta Mills has found the answer to a long felt need for fast colors and have applied them to their time-tested Wamsutta Duck. Sails, awnings, covers and, in fact, anything made of textiles will be more attractive and have longer life when made of this unusual colored material.

Marblehead Plans Owners' Driveaway Cruises

Staples, Johnson & Co. is organizing two driveaway cruises for new owners of the 1931 Marblehead Cruisers which are planned for May 15th and 29th.

Although delivery of Marbleheads from Maine to New York and other southern points is accomplished easily and inexpensively by truck, rail or water, the man buying his first cruiser appreciates a chance of starting its operation under the guidance of factory experts and under actual cruising conditions. And the owners' cruise plans appeal especially to business men in New York and its vicinity because the trips can be made over the week-end.

The fleet will shove off and head down the Maine Coast for Cape Ann and across Cape Cod Bay for the canal. The route is through Buzzards Bay, Block Island Sound and through the Race into Long Island Sound to New York and points further on. Harbor will be made each night.

Accompanying each cruise will be a Marblehead from the Staples, Johnson plant with an experienced pilot and competent mechanic aboard. Their services will be at the full disposal of all cruise members.

New Brooks Catalog

The Brooks Boat Co., Inc., of Saginaw, Michigan, have just issued a new catalogue in which are introduced several new models of their well known knock-down boats. Among the newcomers are a 17-foot V-bottom runabout with 5 feet beam, with speed of 30 miles an hour with Model A Ford motor, or greater speed with more power; 26-foot V-bottom, double cockpit runabout, with speed of 35 miles an hour with a 110 h.p. motor, and suitable for motor installations up to 400 h.p.; 35-foot round bottom, single cabin cruiser, accommodations for four people, with a speed of 12 miles an hour with a 35 h.p. motor.

In the Long Run—

It's the long run that proves dependability. In the short demonstration from the dealer's mooring a cruiser appears at its best. In the long run, day in and day out, in all weather and seas, lies the true test of cruiser quality.

And so, to check and double check Master MARBLEHEAD Cruisers before offering them to you, their builders determined to put them through the severest test they could conceive — the long run along the Atlantic Seaboard and Gulf Coast — from Maine to Mexico.

From Maine a standard MARBLEHEAD Cruiser and a MARBLEHEAD Guide Boat sailed last October for Mexico. The Cruise Commander was under orders to "break 'em up" if possible. Any defects must be shown up — at the builder's risk and expense — before a MARBLEHEAD would be entrusted to a private owner.

Out they went, into the teeth of a howling northeaster along the rocky New England shores, through Block Island and Long Island Sounds, down the Chesapeake and through shallow, icy waterways to Virginia and the Carolinas. They rode the open Atlantic to Charleston, Savannah and Jacksonville. Slid down the Florida coast to a haven at Miami. Rounded the Florida keys, braved the Gulf to Saint Pete and Tampa. On to Pensacola, Mobile, New Orleans, Galveston. With pennants flying they touched at Corpus Christi and Point Isabel and came proudly into the Rio Grande and Mexican waters early in April.

What a record it is! The MARBLEHEADS came through with everlasting credit to the workmanship of those seasoned craftsmen who built them on the coast of Maine.

Your MARBLEHEAD won't have to stand a test like this. But you'll select a MARBLEHEAD this year because it's been pretested for you — in the long run — on nature's greatest proving ground — the Open Sea.

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MARBLEHEADS

MAINE

Prices with complete equipment start at $5650. Choice of Buda or Universal Engines. Single or Twin Screw.

The story of the MARBLEHEAD Maine to Mexico Cruise has been written in delightful fashion by the Cruise Commander. It's yours for the asking. Write for your free copy today.

MEXICO (4500 MILES)

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Dodge Boat Distributors, Inc., 21 W. 46th St., New York City; New York Boat Service Corp., Clason Point, New York City; F. D. Homan, Amityville, Long Island, N. Y.; Atlantic Radio and Marine Co., Inc., Boston, Mass.; Flood Gate Motor Boat Sales Agency, Inc., Washington, D. C.; Rowayton Marine Works, Rowayton, Conn.; C. P. Amory, Newport News, Va.; Frank Andrews Boat Livery, Detroit, Mich.; Hubert S. Johnson, Bay Head, N. J.; Albert G. Frost, Portland, Maine; J. Frank Knorr, Inc., Miami, Florida; Alker-Donovan Co., Inc., New Orleans, La.; Sebo Boat Co., Houston, Texas; Norman I. Black, Hamilton, Bermuda.

MARBLEHEADS ARE BUILT IN MAINE

By

Staples, Johnson & Co., Biddeford

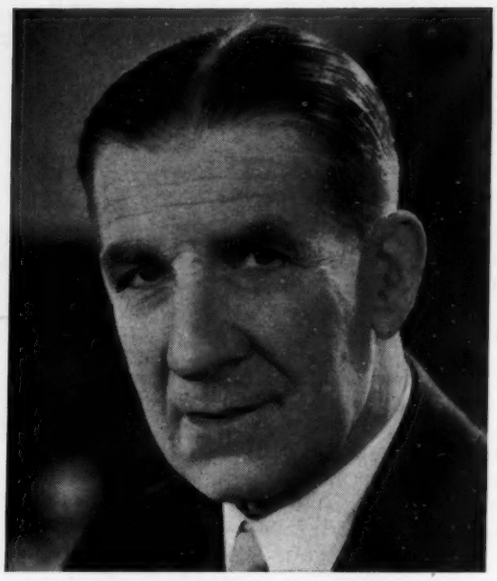
"IT COSTS LESS TO BUILD BETTER BOATS IN MAINE"

Popular Faces are *shaved with* Barbasol

"For the man who wants to keep on friendly terms with his face — I recommend Barbasol. It's 'fast' . . . side-steps all the old shaving troubles, while making the whiskers come clean. I'm a Barbasol rooter every morning when I shave, and all day, too."

Jas J Corbett

* Barbasol testimonials are not paid for



James J. Corbett (Gentleman Jim) who leaped to fame when, as a boy, he vanquished John L. Sullivan and has been famous ever since.

SOME men never have that seedy look as if they needed a shave. How do they do it? Ten to one they're Barbasol Believers *because* Barbasol is so *easy on the face* that *two shaves a day* won't hurt the tenderest skin, planted with the toughest whiskers.

Like magic this new, quick, modern shaving cream softens the beard while holding the hairs straight up to the blade. Crisp and easy the razor slides along; no pull; no scrape. Its wonderful ingredients *protect* your face. Your skin actually feels *better*, softer, more relaxed — after the Barbasol shave.

Follow these directions and you'll follow the crowd

1. Wet your face and leave it wet . . .
2. Spread on Barbasol. Don't rub it in — just be sure it's spread on *evenly* between the hairs . . . **3.** Wet a good blade and SHAVE.

That's all you have to do to get the finest shave in the world. It's simple, easy, quick. Try it today. Generous tubes at all druggists', 35c and 65c, will quickly make YOU a Barbasol Believer, too.

FREE A refillable Tefra Toothbrush, value 75c, with your first name or initial on handle. Finest quality; cuts family toothbrush bill in half. Mail entire empty Barbasol carton (35c or 65c size, or jar) with your name and address. We will mail toothbrush absolutely free with your first name or initial engraved on handle.

The Barbasol Company, Dept. 26
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An Interesting Cruise

The second annual sailaway cruise sponsored by the Richardson Boat Co. will start at the North Tonawanda plant of Richardson and pass through the New York Barge Canal and down the Hudson River to New York. From the latter point the boats will pass to the home ports of their owners, mostly within a short distance of the metropolis.

Twenty-five boats will take part, all recent sales of Richardson, and the fleet will have about 100 participants, as each craft will carry three of four guests in addition to the owner. A gasoline supply boat will accompany the fleet.

Each night the boats will moor together and the social functions will increase the general enjoyment of the trip. As local Cruisabout dealers along the route are cooperating in the arrangements, there is no doubt but what the trip will be of intense enjoyment to the participants.

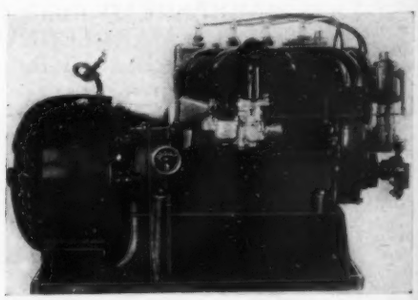
Naval Architects Report Active Season in South

Tams, Incorporated, naval architects and yacht brokers of New York, are just closing a very successful season. Their southern office in the Exchange Building, Miami, has been extremely busy since the first of the year and a large number of sales and charters were consummated through both their offices during the first three months of 1931.

New Electric Plants by Universal

A new line of electric plants, described as the smoothest and smallest 4-cylinder self-contained models on the market, has recently been brought out by the Universal Motor Company, Oshkosh, Wis.

An idea of the extreme compactness of these new plants may be gained from the



The 1 KW marine type electric plant of the new series brought out by Universal Motor Co.

fact that the 1 KW marine type unit measures only 35¼ by 15¼ by 20⅛ inches over all and weighs only 300 pounds.

The plants are driven by an unusually small, but powerful four-cylinder gasoline engine. The engine has precision balanced crankshaft and flywheel and matched reciprocating parts, giving smooth, quiet performance. Due to its small size and refinement of design, unusual fuel and oil economy are also claimed. The electrical parts of the new plants are designed especially for the engine and built as a unit with the engine. Correct electrical characteristics are assured. Auto type starting and remote control are features.

The new Universal models will be made in 1, 2 and 3 KW, DC, 32–110 volt units, for use either with or without storage batteries. AC units are made in 1½ KVA, 2 KVA, and 3 KVA in 110 volts and 220 volts.

THIS is the year to buy a boat. It is sheer extravagance to wait until prices are higher. For today you can buy one of these luxury craft, the latest 1931 models, at the lowest price in history. The built-in beauty of design, quality of construction, and comfort at high speed that have made so many yachtsmen give up other boats to own a Sea Lyon are even more pronounced in these latest models. Lowered building costs permit the lower prices — irresistible to those who know good boats and good value.

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